Do Architects, Engineers Shun Salesmen? .. Pg. 16

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Air Force Efficiency Drive Could Affect Home Cooling Units

By C. Dale Mericle

DAYTON — In an effort to increase efficiency and thereby reduce operating costs of its central heating and power plants, the U.S. Air Force is launching an ambitious program that will include such measures as awards for the most efficient operators and some form of "licensing" or "certification."

This was disclosed during the Heating and Power Conference held at Wright-Patterson Air Force Base here July 26 to 28 under the sponsorship of Maj. Gen. A. M. Minton, director of civil engineering for Headquarters, U.S.A.F.

The conference was primarily concerned with large central boiler plants and diesel-electric generating systems, but the efficiency drive may involve such things as residential air conditioning, it was pointed out by

(Continued on Back Page, Col. 3)

115 Room Units Stolen From N. Y. Contractor

NEW YORK CITY—William A. Schwarz & Son, Inc., local air conditioning contractor, reported that on or about July 23, a group of 115 new, sealed-in-crates, window model room air conditioners were stolen from its warehouse here.

"It is possible," said William A. Schwarz, Jr., "that some of the units, or all of them, may

(Continued on Back Page, Col. 1)

U. S. Seizes 46 Air Cleaners In Cleveland Store

CLEVELAND—A U.S. marshal has seized 46 portable air cleaners in the possession of Halle Brothers Co., a local department store, after the Federal government asked in U.S. District Court here that the units be seized and condemned because they violated provisions of the Food, Drug & Cosmetic Act, the NEWS learned last week.

The units involved were made by McGraw-Edison Co.'s Coolerator (now Albion) Div.

Assistant U.S. Attorney G. W. Morrison, in a libel filed in the U.S. Court and covering the units then possessed by Halle's, said the "Lectrofilter" portable air cleaner and accompanying literature was misbranded.

The government claimed that labeling of the air filters contained false and misleading statements which suggest the device is an effective treatment for relieving allergy conditions, sinus, hay fever, and asthma and destroying airborne bacteria and viruses.

In explaining the action taken in the case, Morrison told the NEWS that the libel was filed and a monition was issued to the marshal. He explained that the monition constituted authority

(Continued on Page 4, Col. 5)

Air Conditioning Sales Seen Below Hopes, Expectations but Not As Bad as Some Say

DETROIT — Answer to the question "how were air conditioning sales this year" as the big selling season moves towards its close is apparently "considerably below hopes and expectations" but "not nearly as bad as some are painting it."

A considerable amount of conversation is being spread around on the subject, and some figures are being tossed around rather loosely. The following will attempt to sift through the opinions and such facts as are available to present as clear a picture of the situation as is possible as of the first week of August:

Pre-Season Predictions: Manufacturers hoped for a 30% increase this year over 1959, which was one of the best years in the history of the air conditioning industry. Distributors and dealer-contractors looked for increases of about the same proportion.

Manufacturers' Sales to Date: Sales of unitary air conditioning equipment for the first five months were up 17%, and reliable information indicates June shipments increased just slightly less than the average for the year. July shipments are generally believed to be down.

Manufacturers sales of room air conditioners for the 10 months of the "air conditioning sales year" (starting Sept. 1) were said to be up 35% by those who have access to the most reliable figures available. Some increase was recorded in June, although it was said to be less than 10% over that of June,

(Continued on Page 29, Col. 2)

Fedders, Studebaker Decline Comment on Reported Merger Talks

NEW YORK CITY—No comment was forthcoming from either company at press time last week on the current status of reported merger conversations between Studebaker-Packard Corp. and Fedders Corp.

Salvatore Giordano, president and chairman of Fedders, said that any conversations with Studebaker-Packard are based on the fact that the latter firm is an automotive producer and Fedders is an automotive components supplier—in addition to a manufacturer of air conditioning and heating equipment.

In South Bend, Ind., Harold E. Churchill, president of Studebaker-Packard, stated that "We have been having conversations with a good many companies, including Fedders."

Studebaker-Packard is said to have a tax credit carry-over of more than $100,000,000.

Giordano stressed that Fedders, like any alert, progressive company, is always talking with various firms relative to mergers. In fairness to its stockholders, Fedders must be receptive to propositions from other companies that would "undoubtedly benefit our stockholders," Giordano said, adding:

"We have had three dozen conversations with as many companies in the last six months, and we shall undoubtedly have three dozen more in the next

(Continued on Page 4, Col. 5)

Rheem Enters Electric Home Heat Field with New Line of Furnaces

CHICAGO—Entry of Rheem Mfg. Co. into the electric heat field with a new line of furnaces has been announced by the company's Home Products Group.

Shipments of the electric furnaces has been started for installation for the coming heating season, it was stated.

Rheem added that its electric heating is to be expanded soon to include a full line of duct heaters for home heating application.

The Home Products Group said Rheem's entry into electric heat "is being made this season with design features and marketing approach that will meet problems advanced thus far by the industry."

"First," according to Rheem, "control system of the new line of electric furnaces will meet the existing known requirements of any electric utility in the United States.

"Second, Rheem is following its established distribution pattern of selling through its heating and air conditioning wholesaling customers and installing contractors."

The new Rheem electric furnaces, designated as Series 5000, are being introduced in three capacities—10, 15, and 20 kilowatts—all housed in a compact jacket 20¼ in. wide, 42 in. high, and 27 in. deep.

"Relating current input to B.t.u. per hour, the 10-kw. furnace has heating capacity of 34,130 B.t.u.," it was stated. "Capacity of the 15-kw. model is 51,195, with 68,260 for the 20-kw. Rheem electric furnace." The company said the flexible

(Continued on Page 4, Col. 2)

Carrier Appoints Major Department Heads In New Div.

SYRACUSE, N. Y.—Russell Gray, president of the newly-formed Carrier Air Conditioning Co., a division of Carrier Corp., announced the appointment of major department heads.

Hermann C. Hoffmann, who joined Carrier in 1937 as a junior engineer, has been named general manager of the Machinery & Systems Operation. Previous-

(Continued on Page 29, Col. 5)

Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Emphasis on Merchandising

When Joe Elliott assumed the Presidency of Borg-Warner's York Div. he issued a significant statement:

"Air conditioning is the next big growth industry—the one big consumer durable goods industry without a high degree of saturation."

That's a good reason why many men who earned their spurs during the heyday of appliance merchandising are infiltrating the air conditioning business nowadays.

Because of that high degree of saturation, appliances have become "off the shelf" items; hence have lost their charm for quite a few aggressive merchandisers.

There's insufficient challenge left in that cockpit arena for the latter's talents, they say.

Simultaneously, managing directors of air conditioning firms have felt the need for imaginative *salesmanship* (the lack of which has been conspicuous in the plumbing, heating, and air conditioning business).

Question: Did you ever try to *buy* a home air conditioning system? What was your sad experience?

Hence, restless sales promoters are being recruited, from the formerly-exciting appliance business, by air conditioning *entrepeneurs.* "Ever the twain shall meet."

There's a filter-down employment of merchandising techniques involved in this interesting situation which bodes well for air conditioning's future.

Sales hotshots who boomed the home appliance business (and then became bored with it) understand the values of contests, doorbell ringing, showmanship, retail sales training, gadget gimmicks, and consumer cultivation through publicity and "public relations."

All of which air conditioning needs. At too long last, emphasis in the heating-cooling-air conditioning business is shifting from thermodynamics to promotion and aggressive selling.

Until recently, hot weather has substituted for salesmanship. When June and July rained out, everybody lost money.

This NEW EMPHASIS ON SALESMANSHIP can be expected to make a Big Boy out of

(Continued on Page 10, Col. 1)

Next Electric House Heating Show Set for '62

NEW YORK CITY—The Second National Electric House Heating Symposium and Exposition, an expanded version of the "highly successful" 1960 program, will be held March 19-21, 1962, in the Sherman hotel, Chicago.

This was announced by the sponsoring organization — the Electric House Heating Equipment Section of the National Electrical Manufacturers Association.

"Announcement of the next symposium and exposition was made at this time because of some reports that it might be held in 1961," it was explained.

"Members of the NEMA section considered this possibility immediately after the 1960 event, but concluded that time was tco short to plan the type of program requested by the 3,000-plus people who attended the first program."

Sponsoring manufacturers stated that the 1962 symposium and exposition will emphasize and detail such electric house heating specifics as the proper installation of equipment, requirements and installation techniques of various types of insulation materials, electric house heating for both new and remodeled homes, and case histories on the use of electric heat and its advantages over other methods of heating.

The program also will feature a review of the most effective electric heating promotions being employed by the industry as a whole, by individual manufacturers, distributors, commercial power companies, REA cooperatives, municipal power companies, and by TVA and other organizations.

The NEMA section will begin to pin-point program topics in the near future following an analysis of replies from exhibitors and conferees at the 1960 program to questionnaires asking for comments on the first exposition and suggestions for staging an even better event in 1962.

Highlights of the section national show will be announced as plans progress.

Fogel Acquires Some BTC Lines

PHILADELPHIA—Fogel Refrigerator Co. here announced that it has reached an agreement with The Brewer-Titchener Corp. whereby Fogel will take over the existing inventory of BTC refrigerated display equipment, ice cube makers, and ice cream and frozen food cabinets.

"Fogel has also acquired all of the drawings, specifications, etc., for this line of cabinets," the announcement said.

"Arrangements have been made whereby Fogel will execute the in-warranty demands which may arise on BTC equipment of this nature which is now in the field. Fogel will naturally have available for the future a complete line of spares and service.

"This acquisition is in addition to Fogel's international and complete line of refrigerated food market equipment and dairy and ice cream merchandisers which has been merchandised under the Fogel label for many years.

"Refrigerated food service equipment and reach-in refrigerators are manufactured and distributed through its Jordan Div. acquired earlier from U.S. Air Conditioning Corp.

Carrier Dividend

SYRACUSE, N. Y.—Quarterly dividends of 40 cents per share on the common stock, 56¼ cents on the 4½% preferred stock, and 60 cents on the 4.8% preferred stock were declared recently by the board of directors of Carrier Corp.

Bohn President Sees Cooling Field As 'One of Most Promising Factors' In Long Range Outlook of Company

DETROIT—One of the most promising factors in the long-range outlook for Bohn Aluminum & Brass Corp. is the company's air conditioning operations.

So stated Terry W. Kuhn, president, in reporting that sales and net earnings of the firm in the six months ended June 30 were the highest for any first-half period since 1956, while earnings per share were the highest since 1955.

"Although air conditioners for the home and commercial uses are already a major factor in our over-all operations, we believe we have barely scratched the surface of this fast-growing market," Kuhn stated.

Bohn's net sales for the first half of this year amounted to $27,528,464, compared with $23,122,220 in the same period in 1959.

Net earnings for the six months, after provision for taxes, were $863,368, equal to $1.81 per share on 477,852 common shares outstanding. This compares with a net income of $824,700, equal to $1.73 per share on the 477,552 common shares outstanding in the comparable period last year.

Results for the second half of this year are expected to match approximately those of the last six months of 1959. "If they do—if we earn what we expect to—we certainly will be able to cover a 25 cent year-end extra dividend, the same as we distributed in 1959," Kuhn further stated.

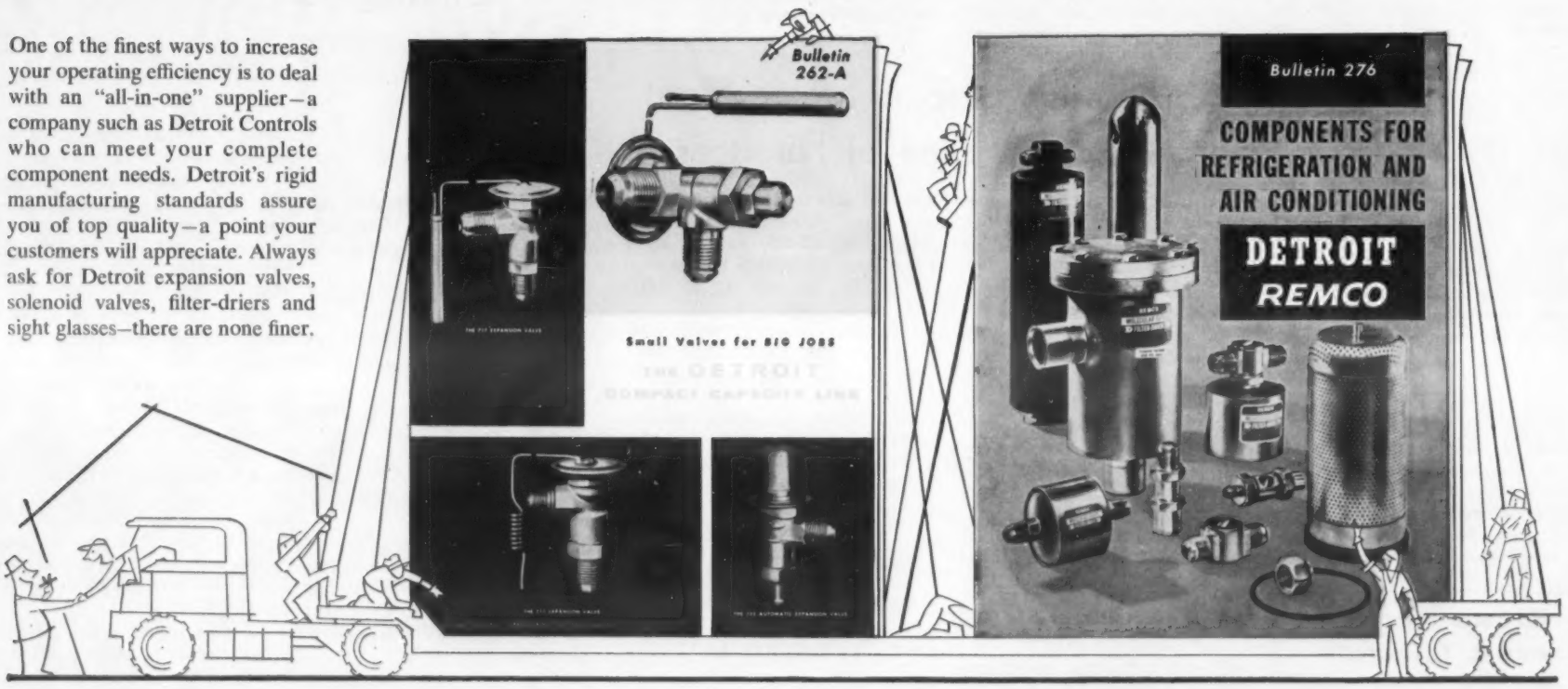
Kuhn attributed the better first-half showing not only to a continuing improvement in operating efficiencies, but more generally to greater diversification of the company activities.

"By diversifying into new markets, Bohn's product list has been so expanded that we now serve more customers than ever before. As a corollary, our automotive business, once regarded as the mainstay of our operations, currently represents only 25% of our total annual volume, even though Bohn's automotive sales are still substantial."

The board of directors of Bohn, at a recent meeting, declared a regular quarterly dividend of 25 cents per share on the outstanding common stock.

YOU GET... AND GIVE... BETTER SERVICE
WHEN YOU USE DETROIT COMPONENTS

One of the finest ways to increase your operating efficiency is to deal with an "all-in-one" supplier—a company such as Detroit Controls who can meet your complete component needs. Detroit's rigid manufacturing standards assure you of top quality—a point your customers will appreciate. Always ask for Detroit expansion valves, solenoid valves, filter-driers and sight glasses—there are none finer.



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AMERICAN-Standard
DETROIT CONTROLS DIVISION

Proposed Metal Conduit Amendment to New Orleans Building Code Withdrawn

NEW ORLEANS — A proposed amendment to the city building code which would require all electrical wiring in certain buildings be protected by metal conduits or raceways has been withdrawn from immediate consideration.

City Councilman Fred J. Cassibry, who submitted the amendment to the council last May, said he withdrew the proposal on the advice of "several parties who believe the amendment was too broad."

At the same time, there were conflicting reports concerning the future of the amendment. Some, including Cassibry, said they understood a new amendment was being drawn up.

But others considered the proposal "as good as dead." Several city officials who had worked on the original amendment said they didn't think anyone was trying to write a new one.

Organizations which had studied the amendment, and later made the recommendations for change, included the Greater New Orleans Code Commission, the Board of Standards and Appeals, and the Louisiana Rating Bureau.

The amendment, as originally written, covered all new and existing electrical installations in the city's "fire zone," an area including most of the business district and several adjoining residential neighborhoods. Also covered were apartment dwellings, hospitals, public buildings, and large commercial stores scattered throughout the New Orleans area.

George W. Flach, the city's chief electrical inspector and secretary of the Board of Electrical Examiners, said various groups, including those mentioned above, had met following introduction of the amendment and tried to:

(1) Reduce the general scope of the proposal by eliminating residential areas, and excepting appliances listed by Underwriters' Laboratories, air conditioning units, and other small appliances.

(2) Recognize plastic and aluminum conduits and type MI cable, rather than restrict all protection to steel.

"But we didn't draw up a new amendment," Flach said. "The next thing we knew, Cassibry notified us he had withdrawn the thing. I've been in on this amendment almost from the start and I don't know now of any group that is still working on it."

And Cassibry, himself, could not name any person or group known definitely to be preparing a substitute proposal.

When the amendment was first brought to the city council, opposing air conditioning and refrigeration contractors gained an indefinite delay in considering the matter. They fought adoption of the code change because it specified that only licensed electrical contractors could do the work.

Anniversary Gift

Skuttle Offers Second Humidifier Free to Dealer Who Buys One

MILFORD, Mich. — Russell Geisler, president of Skuttle Mfg. Co. here, announced that in celebration of Skuttle's 25th anniversary, dealers may purchase one model 711 counterbalanced humidifier and get another free.

Included in this offer to dealers only, is a point of purchase display. Geisler stated that only one package is available per dealer, and that this introductory offer closes Oct. 1, 1960. Trade advertising giving complete details is scheduled for August issues.

Cooler Will Be Cooler

NEW ORLEANS — Two sections of the Orleans parish cooler (the jail) will soon be several degrees cooler, according to Sheriff Louis A. Heyd.

The sheriff announced that two 5-ton air conditioning units were to be installed in two women's tiers at a cost of $10,000. The contract work will be handled by Ackermann Refrigeration, Inc.

White-Rodgers Acquires Gas Burner Line

ST. LOUIS — White-Rodgers Co., automatic controls maker, announced it has acquired the assets of the Burner Div. of Configured Tube Products Co., Bellwood, Ill.

The latter is a producer of burners for furnaces, clothes dryers, hot water heaters, gas ranges, incinerators, deep fat fryers, chicken brooders, and other gas burning applications.

Configured Tube Products, known throughout the trade particularly for its "Thermi-Jet" single port burners and also venturi tubes, will continue operation as a White-Rodgers subsidiary, the announcement said.

All products will be handled by the White-Rodgers field sales organization, as part of an expanded sales program.

White-Rodgers said the acquisition of the gas burner line represents a major step toward product integration and expanded services to the gas industry.

Ranco Dividend

COLUMBUS, Ohio—Directors of Ranco Inc. declared a quarterly dividend of 35 cents per share on common stock, payable Sept. 16 to stockholders of record Aug. 31.

Anaconda Vibration Eliminator, 1½" I.D. x 17" installed in liquid fill line of a 9000-gallon LOX tank installed in a railroad boxcar by Lox Equipment Co.

When –297°F LOX hits the piping, Anaconda VE's absorb the shock

Damping vibration in the rigid piping of refrigeration and air conditioning systems is the job for which Anaconda Vibration Eliminators are designed. But every once in a while the basic properties of VE's are called on to handle another kind of tough job—a tribute to their high quality and dependability.

Lox Equipment Co., Oakland, Calif., makes unfired pressure vessels to hold liquefied gases. The company has to provide protection for valves and piping when liquid oxygen at –297°F or liquid nitrogen at –300°F begins to flow. To absorb thermal contraction and shock from sudden temperature swings that may go over 400°F, it has been using Anaconda Vibration Eliminators now for about four years. VE's have the mechanical properties and corrosion resistance needed, and have been doing a good, dependable job, according to Mr. Robert Hampton, general manager.

The inherent strength, toughness, and fatigue resistance of the true tin bronzes used in both the flexible tubing and wire braiding—and the sound design and construction of the entire assembly—are the reasons why Anaconda VE's stand up in severe service, year after year. Use them for lasting system performance in every air conditioning and refrigeration system.

Anaconda Vibration Eliminators—listed by Underwriters' Laboratories through sizes 4⅛" O.D. – are sold by leading air conditioning and refrigeration wholesale distributors everywhere. For folder, write: Anaconda Metal Hose Div., The American Brass Company, Waterbury 20. Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont.

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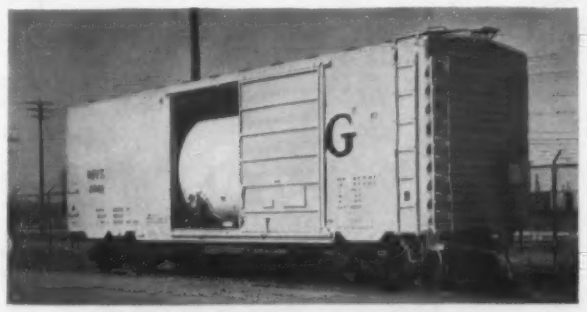


ANACONDA®
VIBRATION ELIMINATORS

Rheem Enters Electric Heat Field--

RHEEM FURNACES are being shipped in capacities of 10, 15, and 20 kilowatts.

(Continued from Page 1, Col. 3)

control system for the electric heating elements "meets the industry problem of high current draw on existing electric utility distribution systems. It incorporates use of a two-stage thermostat as standard equipment.

"The 15-kw. furnace is factory-wired with a 10-kw. first stage—incorporating a 30-second delay between the two 5-kw. elements in this stage—and a 5-kw. second stage.

"Simple manipulation of wire jumpers in the field, however, can create other sequences, such as 5 kw. each for the first and second stages and, by adding an outdoor thermostat, a third stage of 5 kw.

"Ease of making these field revisions of operating characteristics is enhanced by the quick accessibility to all controls by removal of a single front panel."

With an important segment of the market for the electric furnace foreseen in air conditioning applications, Rheem is making the new Series 5000 line available with two-speed blower motors.

"Thus," the company said, "ample air flow is provided for the 22,000, 29,000, and 40,000 B.t.u. per hour Rheemaire units, and for the air-cooled Rheem Corsaire units of 23,000, 34,000, and 42,000 B.t.u. per hour capacity.

"Readily applicable to air conditioning installations, the new Rheem furnaces are expected to find a definite market potential in heat pump installations. In this application, the 10-kw. Rheem electric furnace will function both as the air-handling equipment and as supplementary heating equipment.

Focke Resigns as Crane Unit Chief

CHICAGO—T. B. Focke, president of National-U. S. Radiator Corp. before its merger into Crane Co., has resigned from his position with Crane as vice president and general manager of its Plumbing, Heating & Air Conditioning Group, with headquarters in Johnstown, Pa.

Songer at the same time announced that George W. Burley, vice president of trade relations, would assume additional responsibility for administration of the group by serving as its acting general manager. Burley will make his headquarters in Johnstown.

Commenting on his resignation, Focke said he agreed to enter Crane's employ at the time the company purchased the operating assets of National-U. S. Radiator, to assist in making the transfer smooth and efficient. The basic consolidation, he added, now has been accomplished.

Songer said Focke would continue to serve Crane Co. in an advisory capacity.

Joe Oberc Stricken by Cerebral Hemorrhage

DETROIT, Aug. 4—J. M. (Joe) Oberc, widely-known Detroit parts wholesaler, was stricken by a cerebral hemorrhage recently while vacationing at Petoskey, Mich., it was learned here.

He was in a coma for several days but at last report from Little Traverse hospital in Petoskey he was showing some slight improvement.

Continue Efforts To End N. Y. Strike

NEW YORK CITY—New efforts presumably were being made to end the five-week-old steamfitters' strike after union members rejected, at a meeting on July 28, a contract proposal negotiated two days earlier.

The strike, together with a strike of sheet metal workers, has shut down installation work on large new-construction air conditioning jobs.

More than 3,000 members of Local 638 of the Enterprise Association of Steamfitters turned down the contract proposal that would have ended their strike in the city and Long Island.

The members reportedly objected to proposals that would have eliminated Lincoln's Birthday as a holiday, permitted coil connections by machine rather than by hand, and to a shop steward clause.

Air Cleaner Seizure

(Continued from Page 1, Col. 2)

for the marshal to seize the articles "and he has done so." He said the next step was up to McGraw-Edison.

In Albion, Mich., a company spokesman said that as of last Thursday, the Albion Div. had received no official notification on the charges or any details of the complaint. He added that the division is "taking steps as rapidly as possible to meet with proper authorities in the Food & Drug Administration to determine an appropriate course of action."

Fedders--

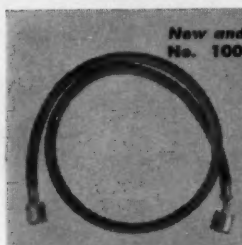
(Continued from Page 1, Col. 4)

six months."

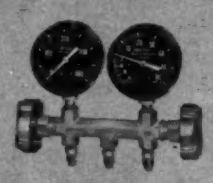
However, Giordano pointed out, "We never divulge anything to the public until we are ready to make a reasonable statement of possibility."

Besides manufacturing domestic compact cars, Studebaker-Packard distributes Mercedes-Benz automobiles in this country. It also makes a variety of plastic products for both the industrial and consumer markets through originally - independent companies acquired last year.

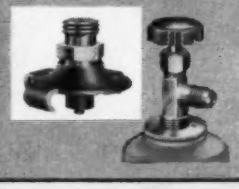
NEW AND IMPROVED IMPERIAL PRODUCTS



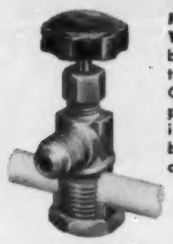
New and more flexible! **No. 100-FT Flex-King Charging Line with Kwik-Kupler End Connections.** Knurled nuts for easier tightening! Confined packing. Buna-N lined, 36" long.



New, a pleasure to use! **No. 352-C Charging and Testing Unit** is built with the service man in mind. Lightweight forged body; ample clearance on wheel handles. Compact.



New Adapter No. 336-C adapts Imperial No. 330-C Top-A-Can Refrigerant dispensing valve for use on Can-O-Gas. No. 330-C Valve fits Charge-A-Can without adapter. Valve and Adapter are reusable.



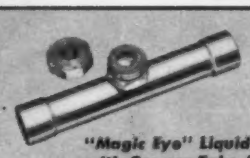
Improved Piercing Valve! **No. 341-C** can be used on 4 sizes of tubing—3/16, 1/4, 5/16, 3/8" O.D. Taps line at any point. Activating nut is integrated with "V" block — cannot be dropped or lost.

New Freon Hose and Attachable Couplings! Easy to make up lines to required lengths, with desired end connections for F-12. Hose has heavy-duty innertube, reinforced cotton braid cover . . . minimum permeation. Hose supplied in coils.

New Production Flaring Tool. Makes flares in less than 4 seconds! Flares 6 sizes of soft copper, aluminum and brass tubing. 3/16, 1/4, 5/16, 3/8, 1/2 and 5/8" O.D. Portable, self-gaging. No. 555-F (45°).

New 9-In-1 Flaring Tool now includes famous Rol-Air feature — rolls flares in the air, automatically burnishes, tool Flares 9 sizes of tubing. 1/8" to 3/8" O.D. It's 37% lighter than comparable tools. Ask for No. 900-FA.

Improved "Magic Eye" Liquid Indicators now with plastic protection cap for glass keeps out dirt. Magic Eye tells you when to charge the system. Flare connections for 1/4" to 1/2" O.D.



"Magic Eye" Liquid Indicator with Copper Tube Extension. No need to disassemble when soldering into line. For 1/4" to 2 1/8" O.D.

New 414-SK or 414-SL Sizing Tools for rerounding Type K and Type L tubing. Used before soldering or before flaring collapsed or out-of-round tubing. 8 sizes — 1/2" through 2 1/8" O.D.

New 406-F 2-to-4 Hi-Duty Adjust-O-Matic Tube Cutter has quick, slide-to-size adjustment. For cutting copper DWV and other copper, aluminum and brass tubing: 2 1/8" to 4 1/8" O.D.

Improved Diamond Valves in 3-way, 2-way and angle types are 3/5 the size of ordinary valves. Flare and solder connections, Teflon diaphragm. For 1/4" to 7/8" O.D. tube. Copper tube extensions on solder type permit soldering into lines without disassembly.

★ ***STEP-UP INSTALLATION PROFITS ON NEW EQUIPMENT SALES***

Here are more examples of Imperial's *continuous* new and improved product program to help you install new equipment more quickly, easily, efficiently. These trouble-free jobs save your profit by eliminating costly call-backs — pave your way to *extra* repeat business!

★ ***SAVE VALUABLE TIME ON SERVICE JOBS***

You're always service time and profits ahead using Imperial refrigeration products! They're time-and-motion engineered to save you moves, save you work, help you complete *more* jobs per day. See your nearby Imperial jobber now for additional product information.

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NAPC Panel Emphasizes Need for Careful Selection of Apprentices Despite Shortage

CLEVELAND—The need for careful selection of plumber apprentices, even though the need for more skilled craftsmen is great, was an often-stressed theme at the panel discussion on "Apprenticeship — Key to Tomorrow's Trained Mechanic" at the National Association of Plumbing Contractors' convention here.

Participants were representatives of the NAPC, the United Association, and the Federal government.

Moderator of the panel was Robert T. Morrill of Beloit, Wis., former president of the NAPC. Morrill is currently chairman of the Apprenticeship Committee of the NAPC and chairman of the National Joint Apprenticeship Committee.

Participants in the panel were James Schoemann, director of the International Training Fund; Norman Piron, assistant director of apprentice training for the UA; Maurice Hansen of the Bureau of Apprentice Training of the U. S. Dept. of Labor; Roy O. Gibson, a member of the National Joint Apprenticeship Committee; and Earl Schultz, co-chairman of the National Joint Apprenticeship Committee.

Don't Try To Train Unqualified Boy

Gibson had this advice for Joint Committees: "Don't try to make a plumber out of a boy unless you know what he is qualified to do.

"Don't make the qualifications too low or too high. If you set them too high, you are in danger of losing a lot of good mechanics." It has been estimated that only about 17% of the required number of plumbing and pipe-fitting apprentices are currently in training to supply the increased construction needs of the next decade.

Morrill pointed out that UA and the NAPC have spent thousands of dollars in the preparation, printing, and distribution of material for apprentice training.

Piron explained that the training material is written from the point of view of the instructors in order to give them the best possible material that can be created for teaching apprentices.

Purdue Program Praised by Committee Co-Chairman

Schultz spoke about the relationship of the apprentice contest at Purdue university to the training of apprentices. He made a plea for genuine interest on the part of all concerned in instructor training. He said that the object of the instructional work at Purdue is to prepare instructors to become more proficient in the use of materials.

"It has been proved that the training course for instructors at Purdue definitely tends to increase the quality of instruction," Schultz said.

Schoemann spoke about the International Training Fund. He said that it is a trust fund created by collective bargaining between the national industrial contractors and the UA.

The fund, created in 1956, is administered by a 10-man board the fund and passes on requests for money. There are currently 213 approved grants and a total of $1,820,343 has been granted to date.

"We want to supplement your own local program—not supplant it," Schoemann said. "The fund is a 50-50 proposition. If you are putting up your own money and doing good work, we will be glad to help."

Hanson spoke about the responsibility of local associations in the selection of apprentices in the plumbing and pipefitting industry.

Hanson said there are 628 local programs under way in charge of 4,000 Joint Apprentice Committee members.

"When apprentices are carefully selected, they become better journeymen," Hanson said. "Many committees have developed outstanding methods of selecting apprentices."

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For more information on capacitors for air conditioning equipment, contact your nearby G.E. Apparatus Sales Office or write General Electric Co., Section 448-07, Schenectady 5, N. Y.

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ACTUAL SIZE

Silver Shield Launched In Cedar Rapids

First Group Chartered West of the Mississippi

CEDAR RAPIDS, Iowa—The first Indoor Comfort Bureau to operate the Silver Shield program west of the Mississippi river was officially licensed at a civic dinner meeting in the Roosevelt hotel here July 21.

The Cedar Rapids-Marion Indoor Comfort Bureau was formed as part of the nationwide campaign to upgrade heating and cooling systems in homes. To help mark the event, Cedar Rapids Mayor Jim Meaghan proclaimed the week of July 17-23 as Silver Shield Week.

Since January, heating and cooling dealer-contractors of the greater Cedar Rapids area have been meeting to organize the bureau, the forerunner to Silver Shield installations.

Training School Completed

During the past four months, a training school using the manual of the National Warm Air Heating & Air Conditioning Association, the sponsoring group, has been held weekly for over 80 local dealers.

The recent dinner meeting climaxed the group's organizing effort. In addition to the official licensing of the new bureau, individuals who successfully completed the 12-week training program were awarded graduating certificates at the meeting. Scheduled as featured speaker was U. S. Senator Bourke Hickenlooper of Iowa.

Officers of New Bureau

Officers of the bureau are: President, E. H. Gundling; vice president, Kenneth Mills; secretary, M. J. (Jack) Ilten; and treasurer, Adolph A. Helm. Members of the bureau are:

James Broadston, Broadston Heating & Air Conditioning, Marion; John Watson, Climate Engineers, Inc., Cedar Rapids; Dick Whiteaker, Filter Supply Co., Cedar Rapids; James Grissel, Grissel Co., Inc., Cedar Rapids; E. H. Gundling, Hawkeye Sheet Metal Co., Cedar Rapids; Eugene Ilten, Heating Service, Inc., Cedar Rapids; Hilmer Heating Co., Wood Acres, Marion; John Lutz, Home Heating Co., Cedar Rapids.

L. A. Ilten, Jr. & Jack Ilten, Ilten & Taege, Inc., Cedar Rapids; Jim Herriott, Jones Herriott & Stevens Oil Co., Iowa City; Don Maresh, Maresh Sheet Metal Works, Cedar Rapids; L. E. McNamara, McNamara Plumbing & Heating Co., Anamosa; Kenneth Mills, A. D. Mills & Co., Central City; John Hoover, S & L Heating Co., Cedar Rapids; Leonard Monahan, Welty Heating Co., Cedar Rapids; Lee Pennington, West Side Heating Co., Cedar Rapids.

Other cities now licensed to operate the Silver Shield program are Kalamazoo, Lansing, and Pontiac, Mich.; Philadelphia; Niagara Falls, N. Y.; Nashville, Tenn.; Sharon, Pa.; and Lima, Ohio.

'Lawn-Light' To Promote G-E Central Systems

TYLER, Texas—An unusual incentive to promote central air conditioner sales — a "Lawn-Light"—was recently announced by General Electric's Central Air Conditioning Dept.

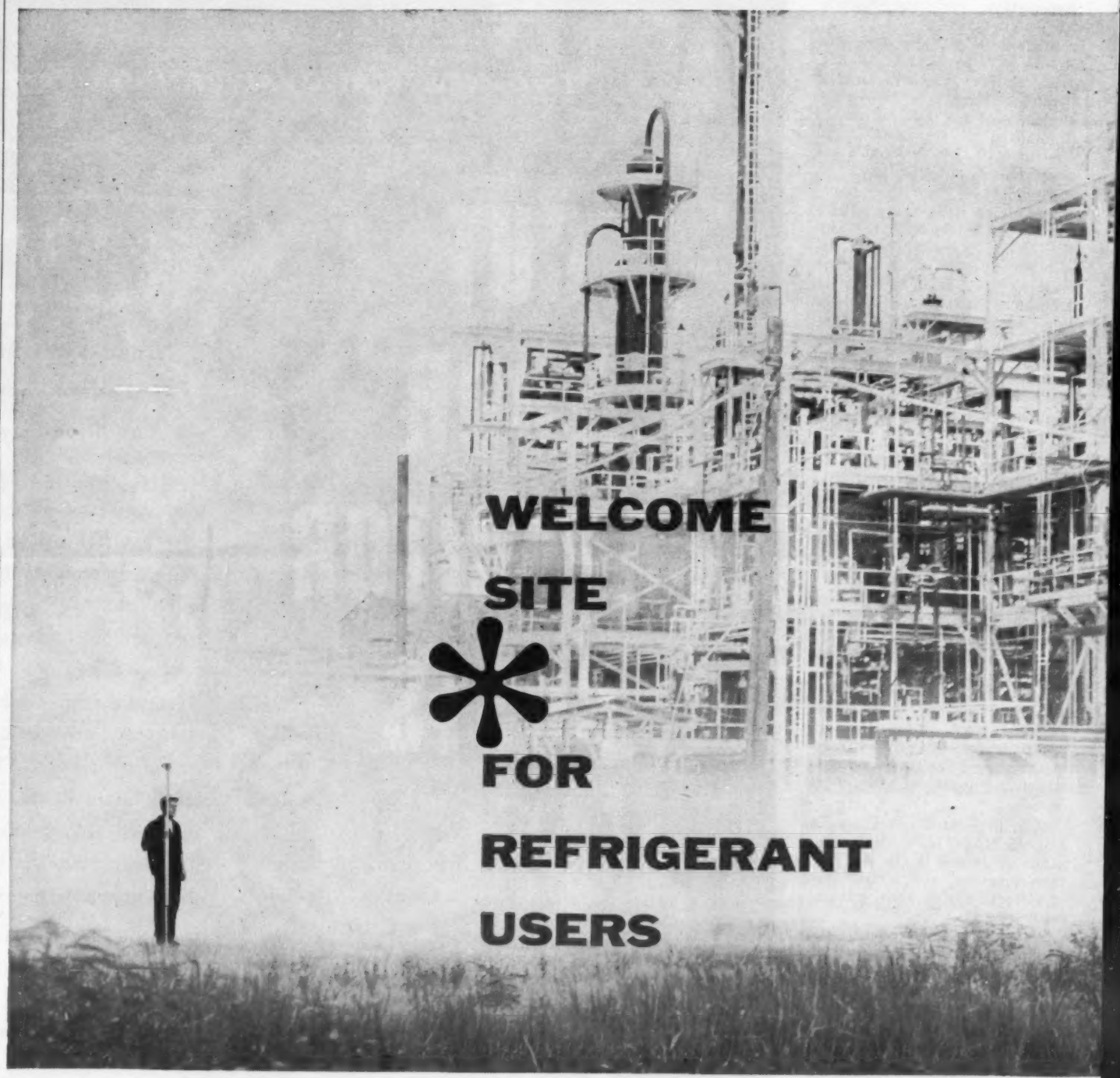
Joe Heffernan, G-E's manager of advertising and sales planning, pointed out that "People are buying outdoor lights for patio, yard, or lawn use at a phenomenal rate. Many are paying as much as $150 for such installations.

"To help G-E dealers cash in on this outdoor lighting boom, we have made arrangements with a well-known manufacturer of quality residential lighting fixtures to obtain one of their best selling outdoor post lamps for our dealers' use to induce potential customers to buy G-E central air conditioning.

"The light, featuring a convenient outlet and photocell (which turns it on at dusk and off at dawn) is a regular $45.95 value plus installation, so dealers can legitimately advertise a $70 value for the lawn-lamp.

"And," Heffernan stated, "the installing dealer will be able to install the light very economically, since he will already have an electrician on the job."

To help dealers make the most of this offer, G-E is supplying them with a full range of promotional literature and sales aids. These include ad mats, direct mail pieces, publicity releases, consumer flyers describing the offer, etc. In addition, a complete kit of these sales tools is available in a "wrap-around" for the distributors' salesmen's use.



*General Chemical announces a new genetron®

Soon east coast air-conditioning and refrigeration wholesalers and original equipment manufacturers will be "next door" to a large new source of "Genetron" Super-Dry Refrigerants. General Chemical has started construction of new "Genetron" manufacturing facilities at its Elizabeth, N. J. Works.

This will be the third "Genetron" plant, supplementing those in Baton Rouge, Louisiana, and Danville, Illinois, and increasing our overall production capacity by more than one third.

This new "Genetron" plant is another example of General's efforts to serve the growing needs of the air-conditioning and refrigeration industry and will reflect the advanced manufacturing and process control techniques which have grown from General Chemical's leadership in fluorine chemistry.

"Genetron" Super-Dry Refrigerants are stocked by all leading wholesalers coast to coast. Insist on the best... insist on "Genetron" Super-Dry Refrigerants from *your* wholesaler.

Carrier Kit Designed To Sell Year-Round Concept

SYRACUSE, N. Y.—A new promotional kit prepared by Carrier Air Conditioning Co. for its dealers and distributors features a booklet designed to help them sell the concept of year-round air conditioning to homeowners.

Entitled "Carrier 12-Month Home Air Conditioning," the booklet says that true air conditioning is more than summer cooling and should provide on a year-round basis for control of humidity, odor removal, and air cleansing as well as temperature control.

The booklet points out that, through its new automatic air purifier which can be connected to the furnace and air cooling equipment, Carrier now offers all of these benefits in a single system. The same year-round air conditioning is also available with heat pump systems.

The promotion kit also contains window streamers, mats for newspaper advertising, suggested sales letters with reply cards, radio scripts, lawn signs for builders, and a 12-page envelope containing the same data as the booklet. A full-size billboard sign also is available.

The kits are being mailed to Carrier distributors, who will supply dealers.

The booklet says that, to millions home air conditioning meant only a way to keep cool. But it adds that true air conditioning should give 12-month comfort and make important contributions to health.

Warm Air Heating, Cooling Group Revises Membership Directory

CLEVELAND — First printing of a new, revised directory listing some 150 American business executives who participate in the activities of the National Warm Air Heating & Air Conditioning Association is now being distributed.

Detailing the 25 boards, councils, and committees of the association, the booklet contains the names of the member of record, his business affiliation, and address.

Also listed are all officers of the national association, its research staff at the University of Illinois, Urbana, Ill., and the association staff members in the Cleveland headquarters.

According to James M. Martin, managing-director of the trade group, the directory will be revised periodically to keep the entire industry informed on the make-up of committees and association officers.

Copies of this directory may be secured by writing to the Association, 640 Engineers Bldg., Cleveland 14, Ohio.

2 New Orleans Contractors In Top Civic Posts

NEW ORLEANS—Two local air conditioning and refrigeration contractors have been elected to high public-service positions here.

Walther, Jr.

Capt. Levy

Henry Walther, Jr., partner of Walther Bros. Co., Inc., retail distributor and contractor of RCA Whirlpool and Coleman air conditioning units, is the new president of the Chamber of Commerce of the New Orleans Area.

And Capt. Neville Levy, owner of Equitable Equipment Co., a boat building and marine supply firm also servicing air conditioning and refrigeration units, is the president of International House, an organization promoting world-wide trade and catering to international visitors in New Orleans.

Walther, one of the city's leading businessmen, has served as treasurer of the Chamber of Commerce and last year was first vice president of the organization. He is also president of Goodwill Industries.

Capt. Levy, whose firm distributes and installs Westinghouse products, is also chairman of the Mississippi River Bridge Authority, a position he has held since its creation in 1952. His present term of office in this post expires in July, 1964.

Other positions the retired Navy captain holds include board memberships of International American Bank, Jefferson Lake Sulphur Co., the Roosevelt Hotel Corp., Coleman E. Adler & Sons (jewelers), and Pokorny Development Co.; a vice-chairmanship of the New Orleans library board; and a membership in the Audubon Park Commission.

Capt. Levy's firm, with plants in New Orleans and Madisonville, La., was founded 37 years ago, shortly after he left the Naval service.

plant in Elizabeth, N. J.

BATON ROUGE, LA.—From this giant fluorochemical center shipments of "Genetron" Super-Dry Refrigerants speed to wholesalers and equipment manufacturers and to our "Genetron" stock points throughout the nation.

DANVILLE, ILL.—General Chemical's Danville plant assures Midwest users of a dependable supply of "Genetron" Super-Dry Refrigerants. This plant also backs up supply to General Chemical's nationwide network of stock points.

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In the Congressional Record

ARI Unitary Equipment Certification Praised by Congressman Broyhill

WASHINGTON, D. C. — The ARI Unitary Air-Conditioner Certification Program won high praise as a "forward-looking step in behalf of the American public," in a speech inserted in the Congressional Record by Congressman Joel T. Broyhill (R., Va.) recently.

Rep Broyhill stressed that the industry "recognized the need for regulation and certification but did not wait for some government regulatory agency to step in." Text of the Congressman's remarks, slightly edited, follows:

"Because it is a relatively new industry, the air conditioning segment of the so-called mechanical refrigeration industry—and air conditioning is, after all, the application of mechanical refrigeration to the spaces in which we live and work—had suffered for many years because of the lack of standardized rating systems, which sometimes resulted in unrealistic claims for the job that certain equipment would do.

"The manufacturers of air conditioning equipment realized that this caused confusion on the part of potential users of their products, and decided to do something about it.

"What did they do? They set up a certification program, under the aegis of the trade association of the industry, the Air-Conditioning & Refrigeration Institute, and today the producers of more than 90% of all unitary air conditioning in the country have signed contracts to participate.

"Unitary equipment, as defined by the ARI under the program, does not cover room air conditioners (which are not a part of the certification program), but does include all types of central residential equipment, as well as many commercial and industrial units, ranging up to 135,000 B.t.u.h. capacity.

"B.t.u.h., incidentally, stands for British thermal units per hour. British thermal units have been established, under the program, as the only true measure of cooling capacity, although the term 'tons' may be used equivalently—that is, when 1 ton is used to represent not more and not less than 12,000 B.t.u.h.

"This program gives assurance to the purchaser of residential air conditioning that the unit he buys bearing the ARI seal of certification will perform according to the rated standards of the institute.

"It means that it is subject to grueling tests by an independent laboratory under contract to ARI to make certain that the rating is correct. The testing laboratory selects certified units at random from distributors' warehouses.

"I am happy to know that the air conditioning industry has established this self-regulating program to assure purchasers of their products. It is another example of free enterprise at work under our American system. Here is an industry that recognized the need for regulation and certification but did not wait for some Government regulatory agency to step in."

Minnesota BHC Is Ninth Local Group To Form

NEW YORK CITY—As a result of an all-industry meeting, the Better Heating-Cooling Council of Minnesota has been formed in Minneapolis.

In announcing the formation of the ninth local group set up to promote the sale of hydronic heating and compatible cooling systems, Franklin Greene, executive director and secretary of National BHC, disclosed "the full scope of planning back of local BHC promotions."

Of the grand total of 95 hydronic industry members currently serving as directors of the nine locals, 29 are hydronic contractors, 28 are wholesalers, 30 are manufacturers or manufacturers' representatives, and 8 are local union representatives, it was pointed out.

Greene said promotional programs in behalf of hot water heat are now being conducted on a day-in, day-out basis by approximately 450 local BHC Council members in the following major markets: Chicago, Cleveland, Detroit, Delaware Valley (Philadelphia), Maryland, Minnesota, Greater New York, Puget Sound (Seattle-Tacoma), and Wisconsin.

"It's evident," Greene stated, "that the 'United Industry' approach is as characteristic at the local level as on the national scene."

Support for local councils, he explained, includes financial endorsement as well as active participation of local affiliates of the Mechanical Contractors Association, the National Association of Plumbing Contractors, and the United Association.

Newly-elected officers of the Minnesota Council include B. J. Mulcahy, Jr., B. J. Mulcahy Co., president; D. Gregg Knapp, Spetz & Berg Plumbing & Heating Co., vice president; and Patrick J. Finn, Roberts-Hamilton Co., secretary-treasurer.

ASHRAE Names Cansdale

NEW YORK CITY — James H. Cansdale has joined the American Society of Heating, Refrigerating & Air-Conditioning Engineers as assistant secretary-public relations and fund raising.

A graduate of Columbia university, he was formerly director of public relations for International Div. of General Electric Co.

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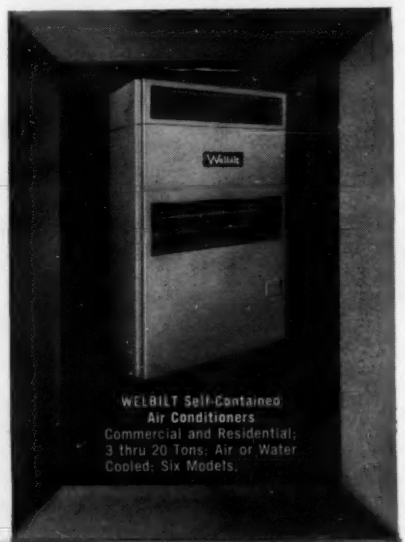

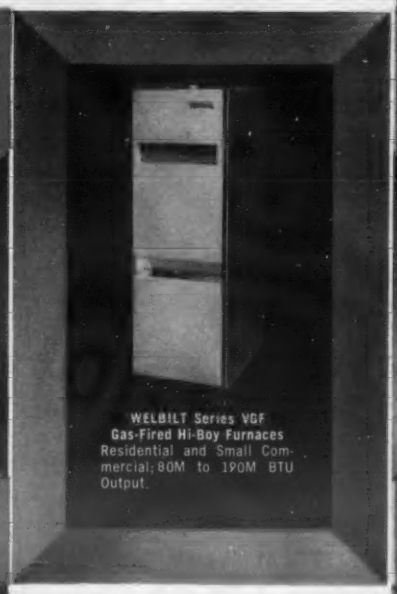

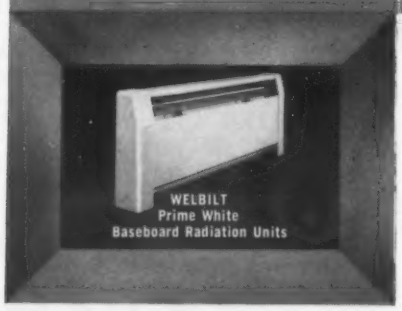

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Welbilt offers you a complete line of highest quality units, fully guaranteed, strongly supported by a continuous program of technical assistance, and backed by a **clean-cut** marketing policy featuring solid protection for **all** resale groups. Whether you sell, service or specify—look to **Welbilt** for the fairest in policy . . . the finest in quality products.

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SUBSIDIARY OF WELBUILT CORPORATION
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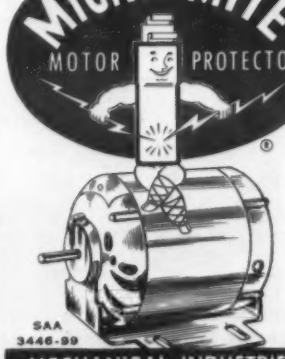

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Union Carbide Announces Winners In Moth-Eaten Moosehead Contest

BYRON E. WATTERS (l.), vice president in charge of refrigeration, Pacific Metals Co., Ltd., San Francisco and Thomas E. Brewer (r.), president of California Hydronics Corp., San Francisco, accept $500 U.S. Savings Bond as first place winners in the UCON refrigerants contest sponsored by Union Carbide Chemicals Co., Div. of Union Carbide Corp. and Ansul Chemical Co., Marinette, Wis., exclusive sales agents to air conditioning and refrigeration wholesalers for Union Carbide. Making the presentation is Ralph Moore, Oakland, Calif., refrigeration manager for Ansul Chemical Co.

* * *

SAN FRANCISCO — Several months of widespread speculation as to the winner and his choice of prizes in the "Ucon" refrigerants contest, sponsored by Union Carbide Chemicals Co., division of Union Carbide Corp., was ended here recently.

Thomas E. Brewer, San Francisco manufacturer's representative, chose a $500 U. S. Savings Bond over the alternate first prize of a "Gen-U-Wine, handsomely moth-eaten moosehead."

The top prize was awarded for the best statement (in 11 words more or less), of "I want to win a moth-eaten moosehead (or one of the other priceless prizes) because. . . ."

Brewer's winning statement was "it will complete our office collection of square heads, dunderheads, bubble heads, empty heads, and pin heads."

Brewer, president of California Hydronics Corp., San Francisco, received his prize in a ceremony held at Pacific Metals Co., Ltd., his wholesaler.

Presentation was made by Ralph Moore, Oakland refrigeration manager for Ansul Chemical Co., exclusive sales agent to air conditioning and refrigeration wholesalers for Union Carbide.

Byron E. Watters, vice president of refrigeration for Pacific Metals, accepted a similar prize in behalf of the wholesaler.

The contest, which was held for a three-month period by Ucon wholesalers, offered five second prizes of either a headless bearskin rug or a $100 U. S. Savings Bond; ten third prizes of either a 6-ft. by 6-ft. frozen northland claim or a $50 U. S. Savings Bond; and 50 fourth prizes of a 100-lb. packet of sourdough or a $25 U. S. Savings Bond.

Wholesalers, whose names appeared on winning entry blanks, received duplicate prizes. All non-winning entrants received a Ucon refrigerants tie clasp.

Second prize winners and their wholesalers were: L. Satterlee, Hample Equipment Co., Elmira, N. Y., and Brady Supply, Elmira; B. E. ZuHone, Power Engineering Corp., Vestal, N. Y., Frank Meire Supply, Binghamton, N. Y.; William F. McCullough, William F. McCullough Co., Roslyn, Pa. and Allied Electrical Appliance Parts, Warminster, Pa.; James B. Grim, John A. Albert Co., San Antonio, Texas and Southwest Air-Refrigeration Supply Co., San Antonio; and O. O. Walters, Refrigeration Service & Sales, Christiansburg, Va. and Southern Refrigeration Corp., Roanoke, Va.

Third prize winners and their wholesalers included: Charles F. Gallagher, Jr., Uniflow Co. of Boston, Roxbury, Mass. and Melchior Armstrong Dessau, Boston; William Randolph, Association of Plumbing Contractors of Albuquerque, Albuquerque, N. M. and Airco Supply Co., Albuquerque; William Beston, Cooney Co., Syracuse, N. Y. and Genesee Refrigeration Supplies, Syracuse; M. Elliott, Comfortizing Industries, West Hempstead, N. Y. and Capson, Inc., New Hyde Park, N. Y.; John Rogers, Westfall Equipment Co., Portland, Ore. and Refrigeration & Power Specialties Co., Portland.

Also, Martin L. Shreiner, Philadelphia Technical Institute, Philadelphia; Merchant & Evans, Philadelphia; James N. Preece, Wansley Refrigeration Service, Austin, Texas and Milstead Co., Austin; Charles E. Kilby, Kilby Refrigeration Service, Bristol, Va. and Southern Refrigeration Corp., Bristol, Va.-Tenn.; Tom Hansen, Hussmann-Milwaukee, Inc. and Gustave A. Larson Co., Milwaukee; and Charles C. Brown, Brown & Compton Refrigeration Co., Montgomery, Ala., Nolin McInnis, Montgomery.

NISA Adopts New Name, Sets June 11-14, 1961 As Convention Date

ST. LOUIS—The 28th annual convention of the Electrical Apparatus Association, Inc. — the new name as of next April 1 of the National Industrial Service Association — will be held in San Francisco June 11-14, 1961, at the new Jack Tar hotel, it has been announced by J. Arthur Turner, Jr., of Tampa, Fla., international president.

Plans to hold the 1961 convention in Denver had to be cancelled when hotel exhibit and dining facilities proved to be inadequate for the association's growing needs.

More than 1,000 operators of electric motor, generator, and transformer service and sales firms in North America are expected to attend the convention, the first on the West Coast since the association met in Los Angeles in 1955.

Information about exhibit space may be obtained from Joseph M. Harrington, executive vice president, National Industrial Service Association, Inc., 7730 Carondelet Ave., St. Louis 5, Mo.

General Chemical Names Fedoruk

NEW YORK CITY—Appointment of John C. Fedoruk as technical director of Allied Chemical's General Chemical Div. was announced by Frank J. French, division president.

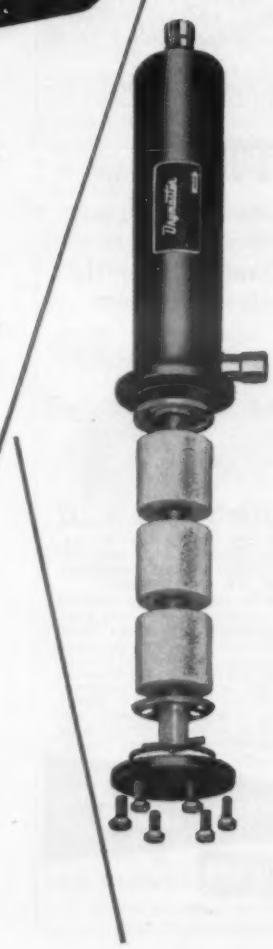
Fedoruk succeeds Dr. Howard H. Hurmence, who was recently named assistant director of research and development for the corporation. With the division 19 years, Fedoruk was assistant technical director for the past six.

Drymaster®
REFILLABLE TYPE
FILTER-DRIERS

REALLY KEEPS SYSTEMS DRY

The new angle Drymaster not only offers the same superbly balanced filtering and drying performance as the regular Drymasters, but it can easily be recharged in a matter of minutes. Hi-Fi Filter Block Briquettes are non-dusting, non-channeling and unequalled for moisture adsorption and filtering capacity. When recharging, the unique cleaning action of the scraper cup efficiently removes oil, sludge and other foreign material from the drier body shell.

New Drymaster refillable type filter-driers are designed for 5 ton through 165 ton capacities with ½" O.D. through 2⅛" O.D. solder connections . . . made of copper for easier soldering. Drymaster Hi-Fi filter-drier briquettes, protected against shock by fibre glass padding, come to you vacuum sealed in attractive cans for guaranteed super drying. Write today to see how Drymaster can do the job better.



MUELLER BRASS CO.
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VAMPCO ALUMINUM PRODUCTS, LTD., STRATHROY, ONTARIO
Exclusive Canadian Representative for Mueller Brass Co.
Air Conditioning and Refrigeration Products

Inside Dope

By GEORGE F. TAUBENECK

(Continued from Page 1)

a hitherto immature business.

"God bless and Godspeed!"

How About that Cleavage?

Paul Augenstein's witty daughter contributes this handy-little-dandy to our Groaner Cycle:

Immigrant lad got a job in a bakery as a bread-slicer. Soon he became so proficient that his boss bought him a longer knife, so he could slice two loaves simultaneously.

From two loaves he went to three, with a commensurate raise in pay. Then he allowed as how he could do four at a time—but, alas and alack—existing bread knives weren't long enough for that trick.

Our Hero quietly went on the prowl. In a butcher shop he found, and purchased, an enormous meat cleaver.

"Look, boss!" he returned triumphantly, "I found a four-loaf cleaver."

This Is On The House

No doubt you are familiar with a "Bloody Mary" cocktail (vodka and tomato juice).

Now it has a companion: tomato juice and Irish whisky. Which is, inevitably, a "Bloody Murphy."

Little Green Men?

According to Nobel Prize-winning geneticist Hermann J. Muller (University of Indiana) life on other planets will be animal-like rather than plant-like, and more likely will live on land than in the water.

Two sexes are probable (what else?) and each individual may have six or more limbs for handling tools and locomotion.

He foresees these other possibilities:

(1) An upright animal resting on a tripod base of two legs and a tail, with two forelimbs developed into arms — rather like a kangaroo;

(2) A four or six-legged animal with tentacles like an elephant's trunk;

(3) A six-legged animal whose two front limbs have evolved into arms somewhat like the centaurs (half horse, half man) of Greek mythology.

Expecting to find creatures in Outer Space that would look human—as in the science fiction tales wherein the Earthman falls in love with a beautiful blonde from Betelgeuse — is "about as ridiculous as to imagine that they would speak English."

Add Newspaper Boners

Childbirth in Russia Is A Group Activity. — *New York Herald Tribune.*

Average Family Is Typical.— *Dallas Times Herald.*

Plane Lands Safely Here.— *Dallas Times Herald.*

149 Spellers Tackle H-J Wrtten Test.—*Syracuse Herald-Journal.*

Eighth Grader's Spellnig Contest Set for Saturday.—*Kalispel Daily Interlake.*

Children's Seats Are Numbered. — *Pittsburgh Sun-Telegraph.*

The bride still was out of operation Tuesday morning. — *St. Louis Post-Dispatch.*

The boys decided that would be the most enjoyable way of winning Jean's hand and heat.— *Xenia Gazette.*

Among exhibits will be an antique Sheraton piano, similar to the scene below, in which night nighting heightens the decor. — *San Francisco Chronicle.*

Quotes of the Week

Big reason for having more technical experts is to read the reports written by other technical experts. — *Cincinnati Enquirer.*

Announcements of "progress" today are signals for people to start figuring how much it is going to smash up their lives.— *Cincinnati Enquirer.*

The simple realization that there are other points of view is the beginning of wisdom. Understanding what they are is a great step. The final test is understanding why they are held.—C. M. CAMPBELL.

Verse of the Week

Here's to the girl who steals,
lies, and swears:
Steals into your arms; lies there,
And swears she'll never love
another.

Last Laugh

Bing Crosby and Barney Dean had been invited to Nelson Rockefeller's stone-faced mansion. As they started up the steps to its imposing entrance, Dean stopped stock-still.

"Forgot my library card," he explained.

Crosby elbowed him in, where Rockefeller met them, and ushered them into a cavernous reception room.

"Can't imagine where my brothers are," Rockefeller hesitated. Owled Barney:

"Upstairs playing polo, no doubt."

WITT LOW TEMP.
Defrostair **COIL** WITH
EXCLUSIVE PATENTED
Automatic Electric Defrost System

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DEFROSTS AUTOMATICALLY

FOR LOW TEMPERATURE ROOMS, FOOD STORAGE, FOOD FREEZING, ICE CREAM STORAGE, INDUSTRIAL LOW TEMP. APPLICATIONS.

Witt exclusive Defrostair patented Heat Trap coil requires only a low cost single pole, double throw time clock for complete automatic defrosting. Easy **low cost** installation. Requires no re-evaporation or special plumbing. Completely automatic. Available in 21 models ranging in BTU capacities from 1400 to 44,100 at 10°T.D. **Write today** for complete Witt Catalog.

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940 N. Sycamore Ave.,
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ANNOUNCING
THAT FOR THE FIRST TIME...
TWO HIGHLY EFFICIENT DESICCANTS SILICA-GEL PA400 AND MOLECULAR SIEVE HAVE BEEN
SUCCESSULLY
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BLOCK FORM
AFTER 7 YEARS OF RESEARCH, ENGINEERING, AND TESTING, TO GIVE YOU THE MOST EFFICIENT REFRIGERANT DRIER AND FILTER COMBINATION EVER OFFERED TO THE REFRIGERATION INDUSTRY
8246 L

'Project Mercury'

Air Conditioning Vital To Maintaining Communications Among 12 Astronaut Tracking Stations Around Globe

NEW YORK CITY — Twelve of the tracking stations that will monitor the course of the first United States astronaut in space are being equipped with air conditioning systems manufactured by Westinghouse Electric Corp.

The installations, strung out in a pattern that encircles the globe, are being built for the National Aeronautics & Space Administration's "Project Mercury."

Many of the stations will be linked by point-to-point communications. Others will be able to talk directly with the astronaut over ground-to-air equipment.

Complex telemetering systems will send hundreds of messages to the network's headquarters at Goddard Space Flight Center, Greenbelt, Md., recording the performance of the sealed space capsule and the personal observations and reactions of the astronaut as he sails through space.

Precise Environmental Control Required

Such complex electronic apparatus requires precise environmental and atmospheric control, according to R. L. Jeans, vice president-products, Westinghouse Electric International Co. Temperature and humidity conditions have to be maintained within an ideal range "to keep the equipment operating at peak efficiency," Jeans said.

Because the ambient — surrounding air and moisture — varies widely in the locations which range from tropic to temperate, equipment cooling requirements differ from station to station, Jeans jointed out.

Central air conditioning systems, with separate water chiller and air-handling components, will serve the larger buildings housing the manned tracking and transmission apparatus. The systems will range from 20 to 40 tons in cooling capacity. Self-contained "Unitaire" air conditioners, which incorporate all the major components of an air conditioning system in one package, will serve auxiliary buildings.

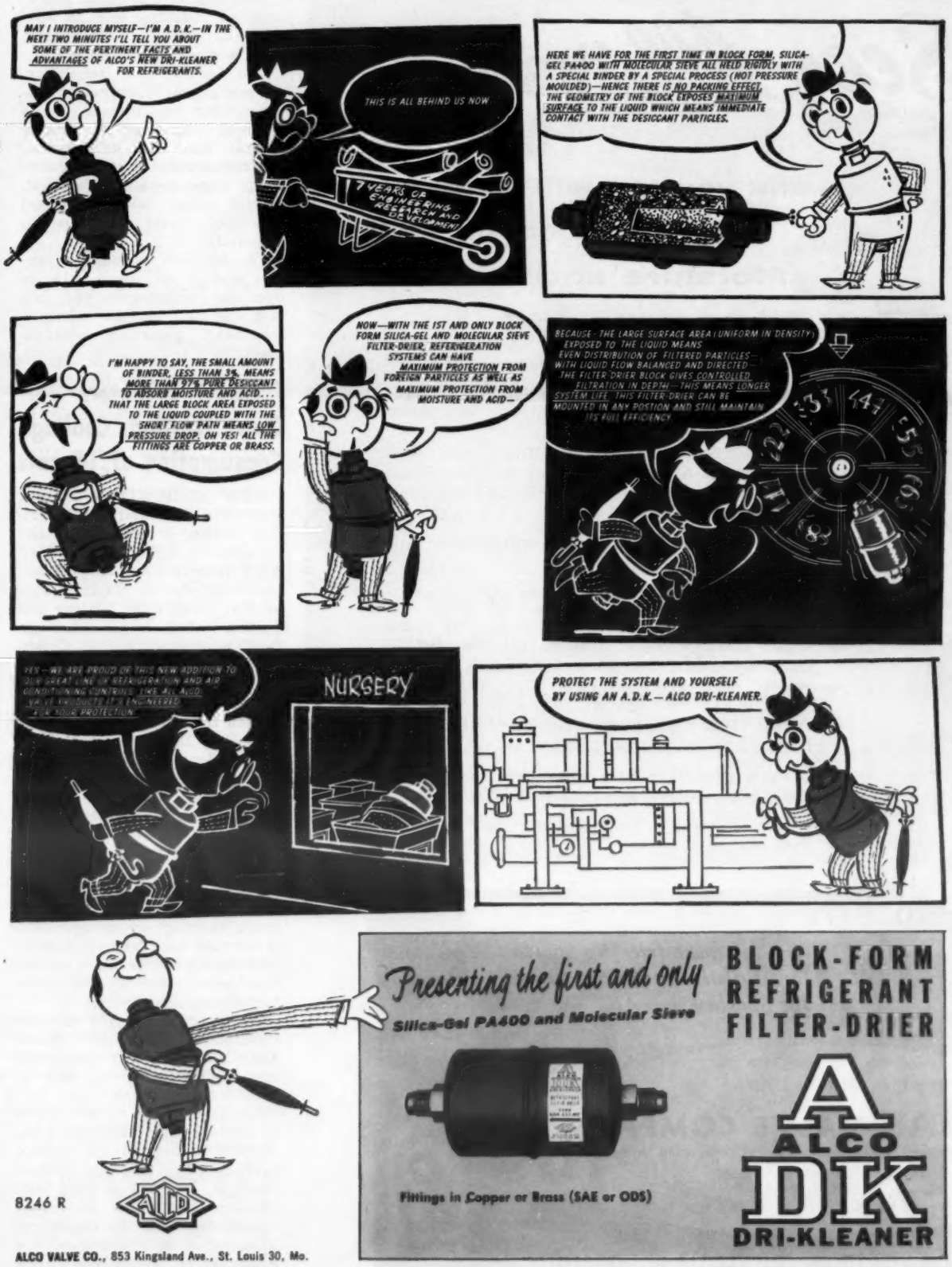
"The first astronaut, who will be selected from seven special trainees, will be sent into space aboard a funnel-shaped capsule, according to present plans," it was noted. "The capsule will be propelled into an orbit about 100 miles above the earth by an Atlas Booster.

"Under present plans, the initial astronaut will circle the globe in orbit three times, each trip taking about 90 minutes. On the third orbit retro rockets will slow the capsule so that gravitational force will bring it back into the earth's atmosphere.

"The Atlas launch will be made from Cape Canaveral some time in 1961. Its path will bring it within tracking range of stations in the Atlantic, Africa, the Indian Ocean, Australia, and the Pacific."

Air conditioning equipment already has been shipped for five of the installations being constructed by Burns & Roe, Inc., New York engineering and consulting firm, for Western Electric, the prime contractor for the tracking and ground instrumentation portion of the project.

Two Westinghouse plants will manufacture the equipment. Chillers, air-cooled condensers, and Unitaires will be made by the air conditioning division in Staunton, Va.; air-handling equipment will be made by the Sturtevant division in Hyde Park, Mass.


MAY I INTRODUCE MYSELF—I'M A.D.K.—IN THE NEXT TWO MINUTES I'LL TELL YOU ABOUT SOME OF THE PERTINENT FACTS AND ADVANTAGES OF ALCO'S NEW DRI-KLEANER FOR REFRIGERANTS.
THIS IS ALL BEHIND US NOW
7 YEARS OF ENGINEERING RESEARCH AND DEVELOPMENT
HERE WE HAVE FOR THE FIRST TIME IN BLOCK FORM, SILICA-GEL PA400 WITH MOLECULAR SIEVE ALL HELD RIGIDLY WITH A SPECIAL BINDER BY A SPECIAL PROCESS (NOT PRESSURE MOULDED)—HENCE THERE IS NO PACKING EFFECT, THE GEOMETRY OF THE BLOCK EXPOSES MAXIMUM SURFACE TO THE LIQUID WHICH MEANS IMMEDIATE CONTACT WITH THE DESICCANT PARTICLES.
I'M HAPPY TO SAY, THE SMALL AMOUNT OF BINDER, LESS THAN 3%, MEANS MORE THAN 97% PURE DESICCANT TO ABSORB MOISTURE AND ACID... THAT THE LARGE BLOCK AREA EXPOSED TO THE LIQUID COUPLED WITH THE SHORT FLOW PATH MEANS LOW PRESSURE DROP. OH YES! ALL THE FITTINGS ARE COPPER OR BRASS.
NOW—WITH THE 1ST AND ONLY BLOCK FORM SILICA-GEL AND MOLECULAR SIEVE FILTER-DRIER, REFRIGERATION SYSTEMS CAN HAVE MAXIMUM PROTECTION FROM FOREIGN PARTICLES AS WELL AS MAXIMUM PROTECTION FROM MOISTURE AND ACID—
BECAUSE - THE LARGE SURFACE AREA (UNIFORM IN DENSITY) EXPOSED TO THE LIQUID MEANS EVEN DISTRIBUTION OF FILTERED PARTICLES— WITH LIQUID FLOW BALANCED AND DIRECTED— THE FILTER-DRIER BLOCK GIVES CONTROLLED FILTRATION IN DEPTH—THIS MEANS LONGER SYSTEM LIFE. THIS FILTER-DRIER CAN BE MOUNTED IN ANY POSITION AND STILL MAINTAIN ITS FULL EFFICIENCY
YES—WE ARE PROUD OF THIS NEW ADDITION TO OUR GREAT LINE OF REFRIGERATION AND AIR CONDITIONING CONTROLS. LIKE ALL ALCO VALVE PRODUCTS IT'S ENGINEERED FOR YOUR PROTECTION
NURSERY
PROTECT THE SYSTEM AND YOURSELF BY USING AN A.D.K.—ALCO DRI-KLEANER.
8246 R
Presenting the first and only
Silica-Gel PA400 and Molecular Sieve
BLOCK-FORM REFRIGERANT FILTER-DRIER
Fittings in Copper or Brass (SAE or ODS)
A ALCO DK DRI-KLEANER
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The one complete line of refrigerant controls: Thermostatic Expansion Valves • Refrigerant Distributors • Solenoid Valves Refrigerant Filter-Driers • Suction Line Regulators • Flooded Evaporator Controls and Reversing Valves

Enro Shirt Plant Air Conditioned

LOUISVILLE, Ky. — Enro Shirt Co. recently started production in its new, completely air conditioned, suburban plant at 4300 Leghorn Dr.

The firm moved from its former factory and office facilities at 1010 S. Preston and warehouse on West Main.

The new, 137,000-sq. ft. plant, built at a cost of more than $1 million, is expected to boost production by at least 30%. It is enclosed in green anodized aluminum panels, with small golden panels at the windows. The firm employs about 750 workers.

Buensod-Stacey Issues Sound Data on Dual Duct Mixing Units

NEW YORK CITY—Certified sound data for Buensod-Stacey dual duct mixing units has been compiled and is being offered in bulletin form by Buensod-Stacey Corp.

The data, contained in Engineering Data Sheet E-29, was furnished and certified by Michael J. Kodaras, acoustical consultant, following exhaustive tests on Buensod air units which mixed air in volumes ranging from 200 to 800 c.f.m., the company said.

The certified sound data bulletin (E-29) is available from Buensod representatives in 50 cities or from the company, 45 W. 18th St., New York 11, N. Y.

Pomona Plant Will Get Air Conditioning

LOS ANGELES—A $500,000 engineering building under construction for the Pomona Div. of Marquardt Corp. will be completely air conditioned.

First step in a 25-acre projected industrial development program north of the division's main plant at N. Garey Ave., the one-story building will add 27,505 sq. ft. of working space. The Pomona Div. is currently engaged in production of the T4 Radar Signal Simulator for the Air Force.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Air Condition Sanctuary Despite Water, Space Problems

INSTALLATION of an air conditioning system at The First Methodist church, Medicine Lodge, Kan., necessitated overcoming two obstacles (1) extremely poor water conditions, and (2) no inside space for equipment. Both problems were overcome with the selection of a Dunham-Bush Large Remote Condensing Unit. The "LRCU," complete with semihermetic compressor, starters, and liquid receiver installed within the outside dimensions of a standard "B" Blower Condenser, air conditions the sanctuary without water. The second problem is likewise solved as the "LRCU" is an outside installation taking up less space than a cooling tower. Rev. Robert M. Gordon, minister, reports: "We are very pleased with the performance of this cooling plant as it cools our church to a comfortable temperature in about one hour and will hold this temperature with a maximum number of people in the sanctuary."

Air Conditioning Sets Stage for Operation of First Completely Automatic Magnetic 'Telefile'

HARRISON, N. J. — Worthington air conditioning will produce the proper temperatures for the world's first completely automatic magnetic "Telefile" system, soon to be installed at The Howard Savings Institution in Newark, N. J., according to Worthington Corp.

The "memory" savings account system will store all of the bank's records on magnetic tapes and drums, therefore making any information desired available instantly. This complex electronic machinery, featuring transistors instead of electronic tubes, is a product of the Teleregister Corp. of Stamford, Conn.

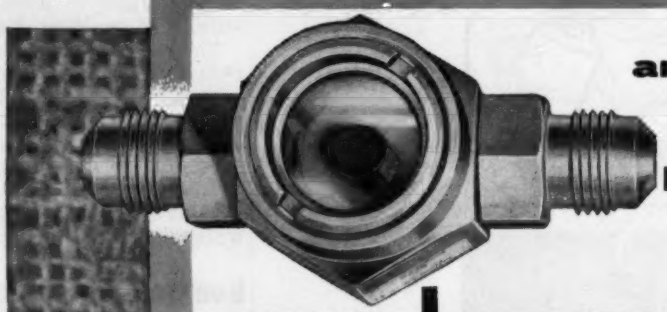
"When Howard Savings called in Robert A. Howie, Jr. Sons, general contractor of Newark, on the air conditioning system, they explained that reliability was the prime factor," it was pointed out. "Should the elaborate data system fail due to inadequate temperature controls, the expense and complications incurred would be costly.

"A chilled water Worthington system of 160-ton capacity had been used successfully since 1953 throughout the rest of the building, and this satisfaction led the Delta Engineering & Conditioning Co. to provide a system using a Worthington 25-ton package chiller connected to a modified Worthington multizone air handling unit. A special electronic and rollomatic filter was also provided.

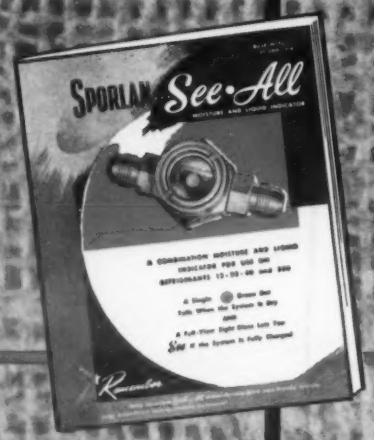
"To insure total reliability, an additional Worthington 25-ton chiller was installed as a stand-by unit, and the entire system was tied into special controls connected to an emergency diesel generator, so that, should power fail, the diesel generator would start up immediately.

"A separate pneumatic control system was used with its own air compressor, and this was also tied into the emergency diesel generator arrangement."

Check these
SPORLAN See•All firsts



and you too will demand
this combination
Moisture and Liquid
Indicator!



- One indicator for Refrigerants 12-22-40 & 500. Green always means dry. Chartreuse is the caution signal, and when the indicator turns to Yellow, the system is too wet!
- Color changes are easily distinguished and reversible.
- An indicator protected from discoloration and washing by a filter pad.
- Color change point that is reliable and accurately calibrated as to temperature.
- Can be installed anywhere in the liquid line.
- A full-view sight glass available with either flare or sweat connections.
- Double gasket – each a molded wedge providing a positive leakproof joint.
- Disassembly not required during installation.

Ask your friendly Sporlan Wholesaler for Bulletin 70-10 for complete details on the Sporlan See•All.

SPORLAN VALVE COMPANY
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85 BROAD STREET, NEW YORK 4, N. Y.

Remember . . . only Sporlan Catch-All Filter-Driers
give you Really Clean, Dry, Acid-Free Refrigerant Systems!

Pollux BTU Meters Chart Heating, Cooling Consumption of Tenants

NEW YORK CITY — Sixteen foreign airlines and one American airline, a restaurant, and an administrative office at New York International Airport are installing Pollux B.t.u. meters so that charges for heating and cooling reflect actual consumption, according to Air Conditioning Equipment Corp.

Two years ago the Port Authority installed Pollux B.t.u. meters in its Operations Building. Now 19 more meters have been ordered for tenant areas.

Under the centralized system at Idlewild, The Port of New York Authority supplies tenants with hot water for heating and chilled water for air conditioning on an individual basis.

Pollux B.t.u. meters record directly in B.t.u. exactly how much heating or refrigeration is actually used by each tenant, eliminating charges on a square foot basis which do not allow for varying consumption.

Pollux B.t.u. meters are distributed in the United States and Canada by Air Conditioning Equipment Corp., 219 E. 44th St., New York.

Chilled water-type B.t.u. meters are being installed in the departure areas of the foreign carriers. The domestic airline, however, is using a high temperature hot water meter designed for 380° F. maximum. This meter is equipped with a magnetic coupling-type drive with provision for a strip chart recorder to record exact B.t.u. consumption at any time.

How New Manager Upped Factory Branch Sales Volume 57% by Using Old Sales Rules

By Frank J. Versagi

DETROIT—Take a geographical area; leave the competition the same; assume no significant change in weather from one year to the next. How does one account for an expanding gross volume and increasing profits at a factory branch which had a previous record of mediocre, even poor performance?

"Don't expect any profound wisdom and unique techniques from me; it's just that I apply to the fullest many of the standard rules of good selling. The ideas have always been there; we *practice* them."

This is the answer given by William G. Kline, manager of Bryant Mfg. Co.'s Detroit branch. Kline has been manager for a year. Sales this past May were 230% over May, 1959; June, '60 sales were 192% over last year's June. Sales so far this year are up 57% over the same period in '59, according to Kline.

Some Types of Accounts Had Been Avoided

How can a change in managers cause such a rapid and measureable change?

For one thing, says Kline, the former salesmen were used to coasting. "They called on their old friends and made almost no new contacts. They avoided altogether certain types of potential customers, like refrigeration equipment manufacturers, because they felt these people knew more about the products than they.

"I assigned territories. I insist on calls to new people each week; we have developed our own technician, who will soon be an engineer, and we call on people who they avoided before.

"I'm here just after 8:00, and the whole organization is rolling by 9:00."

Only one of the former salesmen is still employed by Kline. "The rest weren't discharged," he offers, "it's just that they found it too difficult to work under the new conditions."

Salesmen Get Salary, Commission, Expenses

Kline pays his salesmen salary, commission, and expenses. "I make each man's quota realistic and attainable with a little work. As added incentive, the commission rate goes up on all sales beyond quota.

Until very recently, Kline used four salesmen to cover some 90 dealers in the Detroit and southern Michigan areas. His branch has just been assigned to the entire state, and he sees his dealer accounts going to 200, his sales force probably to six. Kline averages two days a week at his desk; the rest of the time he is out visiting the trade.

In the hot season, Bryant-Detroit's sales break down into 35% cooling, 45% warm air heating, and 20% wet heat. "Starting in September, the breakdown is 50% wet heat, 40% warm air, 10% cooling," according to Kline.

Probably 80% of the summer cooling sales are commercial applications; almost all the winter cooling sales are non-residential.

Asked about the high ratio of wet heat-to-warm air, Kline stated that there is a great deal of replacement of older boilers in the area he serves.

Discussing his relationship with his dealers, Kline offered these points:

1) He does not expect his dealer to stock equipment. "They should not tie up their operating capital in inventory."

2) "We do cooperative advertising with our dealers, the amount of our participation depending on their volume." Most of the sales promotion and advertising is done in newspapers and by direct mail. "Radio and television become awkward media when you are working with so many dealers.

3) The branch will ship for a dealer, if this is necessary, but 70% of sales are picked up by the dealers.

4) Dealers are expected to handle service, but if they encounter difficulty, Kline's technician goes on the job.

Another indication of Kline's success was manifested at a recent dealer meeting which attracted over 200 people. The last similar meeting before he took over drew less than 50 dealers and utility personnel, he said.

Kline has been with Bryant for over 14 years; before that he sold securities. "It may be trite," he insists, "but I still hold—and instill into my men—that to sell well you must sell yourself on your product, your price, and your facilities."

For Kline and Bryant-Detroit, it has worked.

Get your copy

Operating Costs of Residential Air Conditioning and What This Means to Dealers and Installers. By R. A. Gonzalez—25¢ each.

Mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort St., Detroit 26, Mich.

Series 271 single pole and Series 1273 two pole dual function. Temperature models available.

Below . . . Series 270 single pole and Series 1272 two pole single function for either low or high pressure. Also temperature models.

YOU CAN DO MORE JOBS
WITH LESS CONTROL INVENTORY!

Penn's line of refrigeration controls has the capacity and versatility to satisfy all cooling requirements! Single or double pole models are available for all types of applications and are rated to handle single or polyphase motors from 1 through 5 H.P. capacity!

And, you get real economy, too. The two pole heavy duty models eliminate the need for motor starters when used on polyphase motors with built-in overload protectors. With their two separate circuits, these models are really 2 switches in 1. Don't settle for less . . . ask your wholesaler for Penn Controls!

PENN CONTROLS, INC. Goshen, Indiana

EXPORT DIVISION: 27 E. 38th ST., NEW YORK, N.Y.

AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

They'll Do It Every Time

by

Jimmy Hatlo

THAT'S A BUCK FORTY, MAC···
YOU PAY HIM, CHEDDAR···WE'LL STRAIGHTEN IT OUT LATER···YOU OWE ME FOR YESTERDAY··· YOU TOOK HALF MY ENGLISH MUFFIN····
I ONLY PAY FOR HALF A CONTAINER THIS TIME··· MINE LEAKED OUT LAST FRIDAY···· REMEMBER?
I DON'T MIND IF I DO···NOT TOO MUCH···HEH-HEH···I DON'T WANT TO TAKE ALL YOURS···
SOMEBODY OWES ME FOR A JELLY DOUGHNUT SINCE LAST WEEK···
BIGDOME NEVER BUYS··HE JUST HORNS IN···THE CHEAP JOHN···
PAYING FOR THE COFFEE BREAK AFTER WHICH TRY AND COLLECT····))
THANX AND A TIP OF THE HATLO HAT TO LUCILLE GREENBAUM, HOTEL BANCROFT, NEW YORK 13 N.Y.
5-12
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Are We Eating Our Offspring?

ADVERTISING must sell itself to today's teenagers, unless it intends to "eat its offspring" (as swine do, unless prevented).

That prescription for survival of the communications industry is billboarded by Ernest Jones, president of the potent MacManus, John & Adams, Inc. advertising agency. Urging advertising clubs to invite representative college and high school students to their meetings, Ernie Jones compounded:

"I should like to see these young folk treated not as honored guests, but as acknowledged members. I should like to see them allowed to sit as equals . . . to view us as human beings rather than characters in a play or novel."

"Furthermore, everyone presently engaged in business and industry should open corporate doors freely to promising, eager-to-learn young people—so as to win the friendship and understanding that are so urgently needed."

These youngsters soon will be our customers.

It is likely that $20 billion will be spent for advertising by 1968 . . . "just 300-odd weeks from today," Jones predicts.

While all this does not mean that production of advertising will be doubled—inasmuch as media, production, and labor costs will soar, too—at least 30% more advertising endeavor will have to be directed at just 17% more people during the coming eight years.

As an example of inflationating advertising costs, an average prime time TV show will jump 75% during the next 10 years, he estimates. Same situation will obtain for a four-color page in a general magazine.

"Just to maintain advertising's present rate of efficiency as a sales tool, that space will have to be filled with a message so compelling, so dramatic, so convincing that it will produce 75% more sales in 1969 than in 1959," Ernie Jones intones.

Already the consuming public is immunizing itself against a growing barrage of sales messages. The big job *now* is not merely getting advertising believed, but *getting it listened to or looked at.*

Only *startling* advertising is getting through the static of mediocrity today. Only *superb* advertising will be able to cut through the communication chaos coming in 1968.

To compound the problem, advertising nowadays is beginning to suffer from sterility. It is failing to communicate *ideas* to an audience which is becoming increasingly indifferent.

Faced with the need for a tremendous creative upsurge, advertising has but one solution—to recruit creative young people.

Yet, what do today's high school seniors and college freshmen think about advertising as a career? Here's a typical answer received in a survey:

"I'd rather be a gangster than an ad executive. At least, as a hood, you know you're working against the law."

Six of every 10 high school seniors interviewed said they did not believe advertising is successful, or even necessary.

In addition to bucking this attitude the advertising profession finds its recruiting efforts further complicated by the fact that it cannot compete money-wise with missile and electronic proselysters, or the great manufacturing corporations.

Nor will advertising be able to lure those young men and women (a large majority, unfortunately) who are devoted to the sterile concept of cradle-to-the-grave security.

"There is no place in advertising for the pension hunter," Mr. MacManus-John-Adams avers. "We need an inspired chance-taker. We seek the youngster who prefers Disneyland to Forestlawn."

Solely in mortality tables does the advertising profession retain a superiority . . . ad-men depart this earth three years earlier than their brothers in other occupations.

"Earn less . . . die earlier" . . . is a poor sales slogan.

Jones recalls that his own interest in advertising was awakened during his high school days by a friendly printer who encouraged him to acquire a hand-job press, and to work-it-out in a family basement.

As an undergraduate at the University of Michigan, this interest further was stimulated by advertising men who welcomed him warmly to weekly ad-club meetings (attendance made possible by a tolerant professor who permitted him to skip classes).

Every successful career depends on exposure to, and acceptance by, the right people at the right time. But youth can't trust to luck. And neither can a profession which seeks to perpetuate itself.

If advertising is to counteract a dangerous adverse trend in public opinion—and recruit imaginative young people for the creative demands ahead—then we should *sell advertising itself,* and the communications goals it represents—as an honorable, useful occupation.

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark reg. U.S. Pat. Office; Est. 1926

AIR CONDITIONING HEATING & REFRIGERATION NEWS

Copyright 1960, Business News Publishing Co.

F. M. COCKRELL, *Founder*

'The Conscience of the Industry'

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VOLUME 90, NO. 15, SERIAL NO. 1,637, AUGUST 8, 1960

From the Files of the News

25 years ago . . .

Explosion in Chicago's Mairfair Grill July 13 called "accidental" by coroner's jury when it was definitely established that the cause of the explosion was oxygen uniting with oil in the crankcase of the compressor which was part of the air conditioning system being tested at the time.

FHA Deputy Administrator Arthur Walsh ruled that "home improvement loans" are available to purchasers with a "right of occupation" rather than being limited only to **owners** of homes.

P. Edwin Thomas, of United Cork Companies, spoke to the Philadelphia Section of the American Society of Refrigerating Engineers on characteristics of cork as insulation and best ways to apply it.

More in George Taubeneck's column on John H. Patterson, founder of the National Cash Register Co. and instigator of the "Canned Sales Talk" and father of the Sales School—dynamic pioneer in the art of selling.

What Makes People Buy, by Professor Donald A. Laird, is reviewed in the "Book" Section. Psychologist Laird promotes salesman "empathy" with the customer and cites four main motives for customer buying—a desire to buy through a feeling of personal inadequacy, the desire to purchase romance, the desire to live forever, and the unconscious desire for masculinity.

A new electrical disposal-type device which grinds waste foods and thereby eliminates the garbage can from the home has been announced by General Electric Co. The unit is installed beneath the kitchen sink, and equipped with a high-speed grinder, and weighs about 75 lbs.

10 years ago . . .

A Buffalo appliance dealer is offering five years of free service with purchase of any appliance.

Two supermarkets in Compton, Calif. are experimenting with 100% self-servicing of meats, using three butchers and four wrappers to prepare the cellophane-sealed meats.

Editorially: "One of the newest and most promising developments is reverse cycle refrigeration (the 'heat pump') . . . the hot and cold in a package idea."

The Census Bureau reported substantial gains in shipments of self-contained air conditioners in 1949 with 123,407 units, topping 1948's figures of 111,620; room-type air conditioners of the window and console type showed the largest gain over '48.

Philadelphia's Granoff Studios of Music finds its 12½-ton air conditioning system aids study in its 16 small, soundproof music study rooms, particularly in the summer, with its problem of chronic absenteeism due to hot, humid weather now solved.

Long Island's Childs Garden Apartments have Frigidaire window-type air conditioners installed beneath the bedroom and living room windows of each of their apartments for no extra charge to tenants—rents start at $58.50 per month.

In the new up-to-date ABC supermarket at Antioch, Calif., refrigeration is playing an important part. Of the 29 separate pieces of cooling equipment, a self-contained four-lid single-row ice cream cabinet has been placed just ahead of each check-out stand to spur impulse sales.

Kaufmann's department store in Pittsburgh now has an air conditioning system serving its entire top 12 floors as a major feature of its $2 million modernization program and with a potential capacity of 1,650 tons of refrigeration. Unique feature: the more than 400,000 cu. ft. of cleansed, cooled, and dehumidified air circulated every minute is conducted throughout the store through more than four miles of small shallow ducts at a velocity of about 30 miles per hour and discharged through 3,500 special, uniformly distributed air diffusers.

UTILITY LIKES SCHOOL COOLING EDITORIAL

Kansas Gas & Electric Co.
Wichita, Kan.

Editor:

The July 11, 1960 edition of AIR CONDITIONING, HEATING & REFRIGERATION NEWS is circulating through our organization and we are particularly interested in Mr. Taubeneck's article, "Educator Discuss Cooling's Effect on Learning."

May we have permission to reproduce this article ourselves, giving you and the newspaper appropriate credit?

We congratulate you on this article, and also your company on the distribution of a most interesting publication.

RALPH FIEBACH, JR.
Special Applications Engineer

FORCED HUMIDIFIER SERIES STILL SOUGHT

Lennox Industries, Inc.
Marshalltown, Iowa

Editor:

Just recently, I had occasion to ask you to send your reprint "Forced Humidifiers" to one David Manners who is writing a special story on humidification for one of the science magazines.

I now find that we are being called on as a source of information on humidity control quite frequently and your "Forced Humidifiers" is one of the best texts on the subject. I would appreciate it if you would send me a half dozen copies.

J. R. MERRILL,
Public Relations Manager

NEW BUILDINGS BEING COOLED, SAYS PURDUE PREXY

Purdue University
Lafayette, Ind.

Editor:

It was good to see you on the occasion of the dedication of the Herrick Laboratories and then to have word from you about your interest in the idea of changing the current school calendar from its standard eight to nine months to a year-round operation.

On this latter matter I am pleased to give you the following thoughts.

Fundamentally, there is no insurmountable problem to be solved in operating our colleges and universities on a year-round basis, using a tri-semester or four-quarter system in so far as faculty, staff, and facilities are concerned.

Actually, in our larger colleges and universities, this is current practice in the sense that students can take during the summer session the equivalent of a full semester or quarter of work. The principal barriers to year-round operation are tradition and finances.

Traditionally, the American family likes the school-free summer. Students whose parents can afford to pay the costs of collegiate education generally do not wish to study continuously for three years to obtain the bachelor's degree. Students whose parents cannot afford to send their sons and daughters to college must work part of the time, as they now do during the summer months.

At Purdue we estimate nearly 80% of our male students are dependent on their summer earnings to continue in college. No matter what the academic calendar is, those who must earn part of their way will therefore attend part of each year—e.g., two semesters out of three or three quarters out of four.

There may well be increased opportunity for outside work during the fall, winter, and spring periods, provided the student can stay out of school for any of these periods and then be able to take the required courses for his degree during the summer.

Only the largest of our universities are likely to be staffed and equipped so as to be able of offer the required courses of study in all semesters or quarters to enable students to be free to come and go at will.

In our larger institutions graduate and research programs are already operating on a twelve-months basis since a large number of our graduate students are supported by scholarships and fellowships.

At Purdue during the past ten years almost all of our new buildings have been air conditioned to accomplish two general purposes—first, to maximize the use of all space within the structure, and second, to prepare for a large increase in year-round use.

FREDERICK L. HOVDE,
President

AUSTRALIAN FIRM GETS LATEST FROM 'NEWS'

Pope Products Ltd.
Belmore, N.S.W., Australia

Editor:

It was very nice to hear from you and we do appreciate your good wishes. Australia most certainly is commencing a wonderful era in air conditioning.

As you know, room conditioners have been manufactured and merchandised here for some four years. However, it is only over the last two years that any sort of market penetration has taken place.

Pope Products recently introduced the largest range of packaged conditioners ever to be brought into the Australian market. To say the least we are more than pleased with the progress that these products have made. The public response covering all phases of the market has been very good.

We would like you to know that your weekly newspaper has greatly assisted our programme. Being in charge of a large network of dealers, we must at all times have the latest information that is available on air conditioning. Your publication fulfills this purpose very nicely.

I am pleased to say that each article has not only been read and studied, but even has been used as part of our lectures on our recent five weeks air conditioning training course.

We would like to hear from you again, and we hope that you and your family will visit progressive Australia soon.

C. W. WARD,
Sales Manager,
N.S.W., Air Conditioning

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

THE McQuay Hot Rod electric defrost unit cooler system is safe, dependable and exceptionally simple and foolproof in its construction and operation. It is but one of several automatic defrost systems offered by McQuay.

Hot Rod unit coolers all have casings of hammered aluminum, and are equipped with built-in heat exchangers. They, of course, feature the famous McQuay coil construction. Aluminum drain pans are heated for positive de-icing, and all electric elements are accessible and easily removable without disturbing the coil or drain pan.

Your McQuay wholesaler can quickly show you the advantages of the Hot Rod electric defrost systems, or write McQuay, Inc., 1607 Broadway Street N.E., Minneapolis 13, Minnesota.

8 SIZES 3,000 TO 32,000 BTU/HR AT 10° T.D.

McQuay Means Quality

McQuay INC.
AIR CONDITIONING • HEATING • REFRIGERATION

An Architect Tells Why

Do Architects, Engineers Shun Salesmen? (1)

By Kenneth M. Wilson

E. F. Klingler & Associates, Inc., Eau Claire, Wis.

WHY ARE MANY architects, engineers, professional people so often hard to reach by a manufacturer's representative? How can the manufacturer improve his field relationships with such professionals?

In this article, Kenneth M. Wilson, co-owner of E. F. Klingler & Associates, Inc., Eau Claire, Wis., discusses such questions from the viewpoint of the professional. Wilson, who is the author of numerous papers on the non-technical side of engineering and architectural practice, presented these thoughts before a recent Architectural Sales Representative Institute at Ohio State University.

If we are to consider, at this gathering, the influence of manufacturers' representatives on specification format, we must explore the whole picture of manufacturer - professional relations. Perhaps we can anticipate your question of why architects and engineers are so inaccessible to you and begin at that point.

If we accept the thesis that professional men are not readily enough accessible, then the corollary must be that they have other things occupying their time that they consider to be more important to them.

If that be true, how are they occupied, and why must your efforts to reach them be a matter of secondary importance? To arrive at one possible answer to this question, let us examine the normal work-week of one of the principals of our firm.

How Members of Firm Spend Time

Our combined architectural, engineering, and administrative staff consists of about 20 persons. The three principals of the firm are responsible, respectively, for administration, architectural, and engineering work. We try to operate on a weekly schedule of five eight-hour days, and I will say right here that we are not too successful at this. My own particular field of responsibility is the electrical-mechanical-sanitary engineering work in connection with our architectural projects. Architectural work is secondary to basic engineering.

It takes about one hour per day for each of the principals of our firm to handle mail and routine correspondence. As a rule, each principal spends five to six hours per week in promotion of new work and securing commission for new projects. Another eight hours per week is spent in follow-up of projects under construction, such as field inspections, supervision of contractors, and similar items of field work. A good part of these eight hours is consumed in travel to and from these projects.

Time for Technical, Professional Journals

At least two hours of every week should be spent in perusal of technical and professional magazines, technical papers, laboratory reports, cost trends, estimating, and similar activity. Another hour per week is invariably spent in clearing up trouble jobs where one of our men has made a mistake or two. While a professional man seldom admits to be in error, the plain truth is that we make mistakes the same as anyone else and it takes time to clear them up.

Up to this point, we have accounted for 22 hours of a hoped for but seldom attained 40-hour work schedule. In an average week, I must be prepared to confer with anywhere from 15 to 25 sales engineers, manufacturers' representatives, contractors, technicians, and other specialists.

I believe you will agree that one must spend at least 15 minutes in each such conference. More often it is nearer one-half hour. However, using 20 minutes as an average time to spend with each of 20 men consumes another six and a half hours per week.

This leaves a total of 11½ hours per week in which we are expected to conceive individual designs for various projects, check and correlate drawings, check engineering computations, prepare specifications, contracts, and other basic work attendant to the development of plans and specifications for any project. This time is insufficient for this volume of work, yet the work must be done. How to stretch out the hours is the biggest problem encountered in our office.

Neglecting, Reading, Studying Results In Stereotyped Work

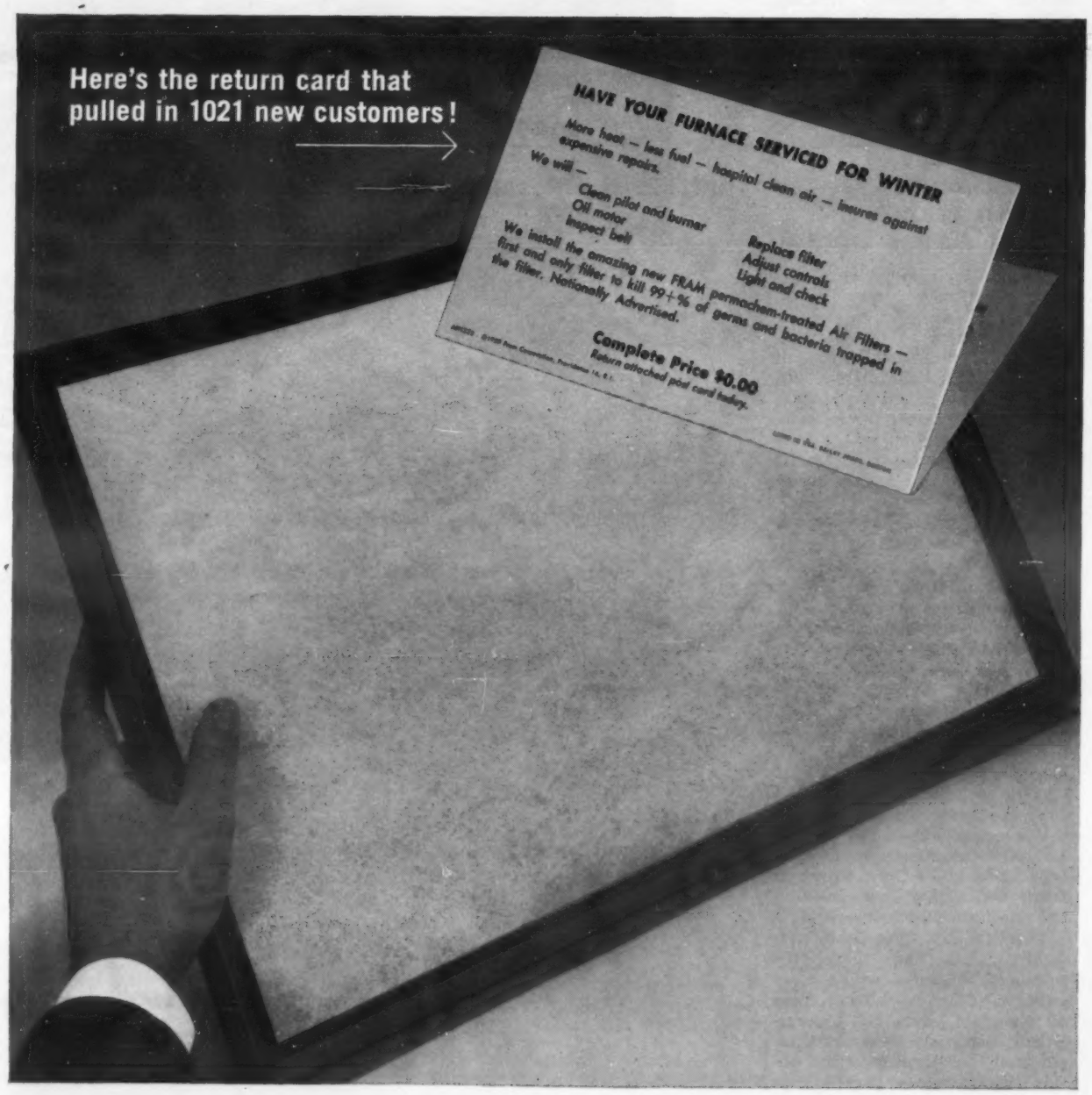
True, we can and do put in many, many extra hours. I am pleased when I find myself with two or three free evenings in any week. We can and far too often do neglect our reading and study. However, if we neglect this matter too frequently, our work soon shows it by displaying more than a hint of being stereotyped.

We can, and unfortunately do, cut down on both the time allotted and the number of manufacturers' representatives we see, particularly if we are under pressure to complete our work on a given project. However, if we use this device for too long at a time, we tend to lose sight of new products, new developments in materials, and new applications of old products.

This unfortunate situation, which exists in one degree or another in every architect-engineer office, is one through which the professional man must plot his course through the lesser of several evils. No matter how he attempts to distribute his time, some phase of his practice must from time to time be neglected. Most frequently it turns out to be his relations with manufacturers' representatives.

This picture of a professional man's work week will perhaps explain why these people are

Wichita heating and cooling new customers from one FRAM® permachem


Here's the return card that pulled in 1021 new customers!
HAVE YOUR FURNACE SERVICED FOR WINTER
More heat – less fuel – hospital clean air – insures against expensive repairs.
We will –
Clean pilot and burner
Oil motor
Inspect belt
Replace filter
Adjust controls
Light and check
We install the amazing new FRAM permachem-treated Air Filters – first and only filter to kill 99+% of germs and bacteria trapped in the filter. Nationally Advertised.
Complete Price $0.00
Return attached post card today.

so frequently beyond the reach of sales representatives but it does not offer much of a solution to the problem.

The procedure in the solution of any problem can be drawn from what we learned in the study of geometry in our high school days. First we assemble all of the known facts into a hypothesis. From this we determine the phenomena of cause and effect. Study of cause and effect usually points out a probable solution.

Why Are Sales Representatives First Place To Cut?

Pursuing this line of reasoning, we arrive at the question of why the architect-engineer will cut down on his allotted time for conferring with manufacturers' representatives before utilizing any other alternative. For one of the answers, let us go back to the first item in the previously outlined work schedule, namely, the handling of incoming mail and routine correspondence.

Do you have any idea of the extent to which your employers, in the manufacturing fields, flood our mail with non-essential literature, which can perhaps best be described as plain literary garbage? Small as our office is, in relation to most such organizations, I believe we throw away well over 100 lbs. per week of manufacturers' promotional bulletins without so much as a second glance.

The fact of the matter is that even with this hurried screening, our files become so filled with non-essential literature that we have difficulty in keeping more than a few key reference catalogs completely up to date.

We are continually bombarded with so many bulletins and promotional sheets from so many sources, that sooner or later we become apprehensive of using any kind of product other than a few of the old stand-by items for fear that our information is not current, that perhaps new and important data sheets may have been carried out with the rest of the garbage.

Too Much Literature Directed at Consumer

If we were to properly file all of the data we receive, and keep all of our catalogs completely up to date as you expect we should do, we would have to assign at least one person and possibly more to do nothing but keep up with this flood. Having to cope with the situation day after day does not enhance the welcome extended to manufacturers' representatives when they do call on us.

Even the avalanche of mail would not be so undesirable if it contained information that had any essential value to the professional man. Unfortunately, nine out of ten pieces of promotional literature we receive is pointed at appealing to the ultimate user, but certainly not to the professional designer or specification writer.

For example, the connection between a full color photo of a bouquet of long-stemmed roses and a high-voltage interrupter switch does not immediately ring a long silent bell in my mind. I find myself strangely unmoved by an almost life-sized Miss America in a daringly low-cut gown extolling the virtues of a brass faucet, and am equally unmoved by a bikini-clad bathing beauty being carried away by the romance of a packless pipe joint.

The first step that you can take to improve your relations with the design profession is to impress upon your parent organizations the need to clean up the mails, and to eliminate the insulting implication that architects, engineers, and specification men are in the mental stratum that will respond to this type of appeal. We want facts—not fiction. Furthermore, we want our facts presented without gingerbread, in a way that makes them readily accessible when we need them.

(To Be Continued)

Bohn Promotes Simison, Reid In Danville Div.

DANVILLE, Ill. — Two promotions have been announced by the Danville Div. of Bohn Aluminum & Brass Corp.

C. Simison

Charles Simison is moving up from field sales engineer for unitary coils to sales manager, Unitary Coil Dept. B. W. Reid has been appointed sales manager, Heating & Air Conditioning Dept.

B. W. Reid

Simison's territory had consisted of Ohio, Indiana, Kentucky, and upper New York State. He will now travel nationally to promote the sale of Bohn unitary coils and appoint new representatives for the Danville Div.

Reid will also travel nationally for the Danville Div. with responsibility for appointing new representatives and promoting sales of Bohn products in the heating and air conditioning fields. He was formerly a Bohn representative in Kansas, Missouri, Nebraska, southern Iowa, and southern Illinois.

Acme Breaks Ground For Branch Plant In Greenville, Ala.

GREENVILLE, Ala.—Ground was broken late in June on a 50-acre site here for a new branch plant for Acme Industries, Inc., Jackson, Mich.

The new plant will contain 100,000 sq. ft. of manufacturing space, with future plans calling for a building of approximately 250,000 sq. ft. Completion is scheduled for early October.

Acme Industries has long anticipated such an expansion in the South, K. A. Weatherwax, president, announced. He said the company's two plants in Jackson will continue to produce air conditioning and refrigeration systems, but that "these additional facilities in the South must be provided to take care of the ever-expanding air conditioning market."

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

service contractor gets 1021 mailing that features -treated Air Filters!

Proof you can boost service business with amazing FRAM Filters that kill 99+% of germs trapped!

Here's how Sappio Heating and Cooling Company of Wichita, Kansas, used the benefits of FRAM permachem-treated Air Filters to greatly increase service sales.

In the summer of 1959, owner John Sappio picked 3,000 names out of the Wichita Telephone Book. These names were used for a mailing featuring FRAM permachem-treated Air Filters — the "first and only filter to kill 99+% of germs and bacteria trapped in the filter."

Result:
1021 new service customers in just two weeks!

Mr. Sappio reports: "This is the largest return we ever got on a service mailing. We attribute this to the extra benefits guaranteed our customers by these FRAM Filters."

Bonus: a large number of furnace replacement sales by Mr. Sappio's crew during service calls — and several air conditioning replacement sales this Spring to these same customers!

You can boost *your* service business by installing and promoting FRAM permachem-treated Air Filters. Only FRAM Filters offer your customers all these benefits . . .

- Kill 99+% of bacteria, mold, mildew trapped in the filter!
- Stop musty filter odors!
- Keep air hospital-clean!
- Trap dust, dirt, pollen!
- Need no oil!
- Exclusive anchor-locked frame cannot settle, vibrate, blow, or soak loose!

You can't miss with FRAM Air Filters! Mail this coupon today . . .

Guaranteed by Good Housekeeping

FRAM permachem-treated AIR FILTERS FOR HEATING FOR COOLING

FRAM *Aire Corporation*
Division of FRAM Corporation, Providence 16, Rhode Island

FRAM Aire Corporation
Division of FRAM Corporation
Providence 16, Rhode Island

Yes, I'm interested in the profit-making opportunity offered by FRAM permachem-treated Air Filters. Send me complete information, and name of my nearest distributor.

NAME.....

ADDRESS.....

CITY..... STATE.....

1959 Cast Iron Boiler, Radiation Shipments Hit $90.4 Million

Commerce Department Statistics Indicate Geographic Distribution

WASHINGTON, D. C.—Manufacturers' shipments of cast iron boilers and cast iron radiation in 1959 were valued at $90.4 million, according to the Building Materials Div., Business & Defense Services Administration, U. S. Dept. of Commerce.

Shipments of boilers accounted for $73.8 million, or 82%, and shipments of baseboard, convectors, and small and large tube radiation totaled $16.6 million, or 18%.

This information was obtained as part of a detailed survey of the heating industry conducted by the Building Materials Div., it was pointed out. Statistics were obtained from 19 manufacturers "and represent substantially complete coverage of the industry," the survey report said.

Subsequent Listings To Include Other Equipment

Charles P. Redick, director of the Building Materials Div., said subsequent releases will include data on manufacturers' shipments of electric heating equipment, steel heating boilers, warm air furnaces, steel and nonferrous radiation, and a special report on the proportion of units of all types installed for purposes of replacement and repair.

In the recently-released report, it was noted that "Historically, wet heat systems have sold best in those heavily populated areas of the United States having a long winter season. In 1959, nearly 40% of the reported shipments were delivered to New York, New Jersey, and Pennsylvania—the Middle Atlantic geographic division of the United States (Table 1).

"The New England and East North Central Divisions together received shipments valued at $28.5 million, or 31.5% of the total U. S. manufacturers' sales. This is the first time geographic distribution data has been available on destination of shipments.

"Sales of cast iron boilers are a major factor in the residential construction segment of the wet heat market. More than 90% of the 227.5 thousand cast iron boilers shipped by manufacturers in 1959 had a B.t.u. output of less than 350,000 B.t.u.h. (Table 2). Included in the total were 49,000 units shipped as packaged boilers. . . .

"Gas-fired cast iron boilers were the most popular type shipped in 1959, closely followed by oil-fired boilers. Gas-fired boilers numbered 120,732, or 53.1% of 1959 shipments; oil-fired boilers numbered 101,348, or 44.5%. Boilers fired by solid fuel accounted for the remainder, except for 110 for which fuel was not designated.

The report included the following table showing "the relative importance of the four kinds of radiation equipment manufactured of cast iron."

Type of Radiation	Output in thousands of B.t.u./hr.	Per cent of total
Baseboard	1,742,877	37.4
Convectors	909,211	19.5
Small tube	1,939,624	42.6
Large tube	24,285	.5
Total	4,665,997	100.0

Regarding the outlook for the year, the report said that "1960 promises to be an excellent year compared to the average for the previous decade."

Table 1—Cast Iron Heating Boilers and Cast Iron Radiation Equipment:

Value and Percentage Distribution by Destination of Shipments by Census Geographic Division

Census Geographic Division	Shipments Value	Percent
New England	$14,631,571	16.2
Middle Atlantic	35,503,868	39.3
East North Central	13,841,355	15.3
West North Central	4,221,657	4.7
South Atlantic	6,580,491	7.3
East South Central	1,001,865	1.1
West South Central	1,374,974	1.5
Mountain	2,663,514	2.9
Pacific (including Alaska and Hawaii)	1,933,000	2.2
Exports;* and destination of shipments not known	8,657,705	9.5
Total	*$90,410,000	100.0

*Exports were valued at $355,610.
Source: U. S. Department of Commerce, Business & Defense Services Administration, Building Materials Division.

Table 2—Cast Iron Heating Boilers:

By B.t.u./Hour Output Rating

B.t.u. Output Rating	No. of Units	Percent
0-349,000 B.t.u. output per hour	206,931	90.9
350,000 to 750,000 B.t.u. output per hour	13,424	5.9
Over 750,000 B.t.u. output per hour	7,172	3.2
Total	227,527	100.0

Refrigeration explained

in 32 pages of terse copy and modern illustration. Invaluable to Service and Installation Technicians and Students. Available at $1.25 a copy, 10 copies or more $1.00 each. Special rates to schools.

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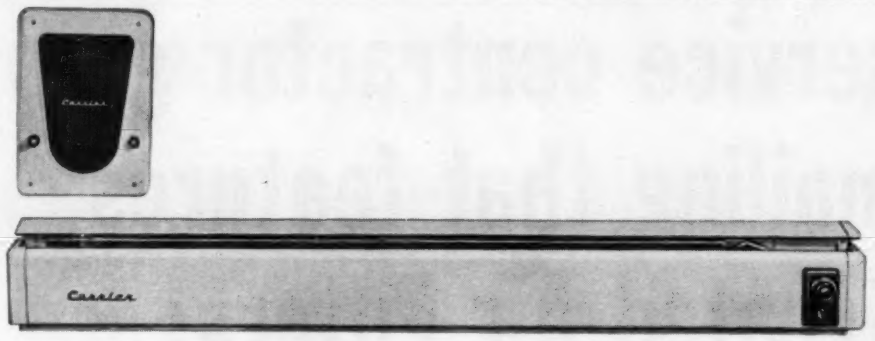


CARRIER ELECTRIC HEATERS

More and more homeowners are asking for electric heating—and Carrier provides the best answer in a complete line of baseboard panels and wall inserts for any new home construction or remodeling job. No matter what the size and shape of the space, there's the ideal solution in the Carrier line. Baseboard panels available in two models (one with optional built-in thermostat) in capacities that range from 341 to 4265 Btuh. Fan-driven wall inserts also available in two models, with capacities ranging from 2559 to 13,648 Btuh.

ONLY A CARRIER DEALER HAS EVERYTHING

for residential heating!

CARRIER AIR PURIFIER

Latest product of Carrier research, this sensational new unit cleans the air and humidifies in winter. Through a unique self-cleaning process, it filters the air of odors, removes pollen and other harmful elements. Easily attached to a forced air furnace or air conditioning system. The newest Carrier exclusive for Carrier dealers!

BETTER AIR CONDITIONING FOR EVERYBODY EVERYWHERE

Carrier

'The New Look In ARW' Will Be Described At Region 1 and 10 Meetings by Thom Muir

CLEVELAND — A presentation on "The New Look In ARW" will be made by Thom Muir, executive director of the Air Conditioning & Refrigeration Wholesalers, at forthcoming meetings of ARW Region #1 and Region #10.

Members of Region #1, which includes the six New England states, has scheduled its fall meeting at Jug End Barn Inn, Great Barrington, Mass. on Sept. 21 and 22. Invitations to representatives of manufacturer suppliers have been extended.

This meeting is a stag affair, according to Philip Taylor, chairman of the region.

"This meeting is undergoing a change this year," Taylor stated. "In the past, we felt the manufacturers and our members could hold informal type meetings and accomplish the purposes desired. Now we are attempting to go into more planned programs.

"We have asked Thom Muir, executive director of ARW National, to present to us the plans and programs of the National and to give us the procedures for specific programming in the future for our regional affairs. This presentation will be made to both the members and our manufacturer guests. In this way we will be able to better coordinate our mutual objectives for future business growth."

On Wednesday, Sept. 21, the banquet will be held and Thursday morning, Muir will present "The New Look in ARW."

The first formal meeting of Region #10 will be held Sept. 23 and 24 at Rocky-Point Inn, Inlet, N. Y. Members of this region are from upstate New York and parts of Pennsylvania.

Under the chairmanship of Frank Meier, Binghamton, N. Y., invitations will be extended to representatives of manufacturers to join with the ARW members and their wives in this first meeting.

As announced previously, this region was authorized to form as part of ARW National last April by the board of directors. Since that time the ARW members in the area have selected their officers and have nominated a director to serve on the National board.

A closed meeting of members will be conducted on Sept. 23 at which time Muir will present the programs of the National. He will also outline the requirements of the regional activities to tie in with these programs.

On Saturday morning, Muir will present the "New Look in ARW" to members and manufacturer guests. At the banquet Saturday night, Charles Koopman of Boston, immediate past president of ARW, will give the charter to the region.

A golf and fishing tournament is slated for the men during the meeting. For the women, a complete entertainment schedule has been planned.

Reservations should be directed to Rocky-Point Inn or Doug Marshall of the R. D. Marshall & Co., N. Pearl & Van Woert Sts., Albany 1, N. Y.

Another ARW Region, #11, held a meeting June 13 in Vancouver, B. C., Can. Wholesale members met with W. C. Miessemer, ARW president, and Muir.

Purpose of this meeting was to outline future plans and program of the association. In addition, the problems of the Canadian members were discussed.

Region 9 Oct. 8 Meeting To Have Western Flavor

CLEVELAND—Region No. 9 of the Air Conditioning & Refrigeration Wholesalers will hold its annual fall meeting Oct. 8 and 9 at the Alisal Ranch and Resort, Solvang, Calif.

Region 9 members are from California and Arizona.

Jess Rauch, chairman of the region, announced that invitations will be extended to suppliers and manufacturer representatives to join with ARW members in this first meeting.

Registration of members and guests will take place the evening of Oct. 7. In addition to the business meeting scheduled for Saturday afternoon, a golf tournament, cocktail party, and banquet, including dancing, will be held.

"A highlight of the program is the Sunday breakfast held out on the range," it was noted. "To get to the flapjacks, bacon, and eggs, horses will be furnished by the ranch. For those lacking the traditions of the west, a bus is also available."

General Chemical Plans New Plant At Elizabeth, N. J.

NEW YORK CITY—Plans to build a large new plant at Elizabeth, N. J. to produce its "Genetron" line of fluorinated hydrocarbon refrigerants and aerosol propellants were revealed by Allied Chemical's General Chemical Div.

The plant will be built on a site at its Elizabeth Works, where the company now produces sulfuric acid for industrial consumers in New York and New England and has bulk storage facilities for "Genetrons."

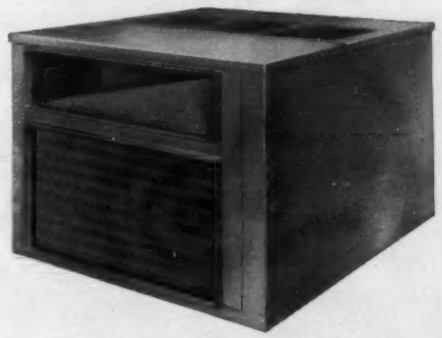
The new "Genetron" facility, the company's third such plant, will increase General's over-all capacity by more than a third.

Initial products to be produced are the three primary refrigerants and aerosol propellants: Genetron 12 (dichlorodifluoromethane), Genetron 11, (trichloromonofluoromethane), and Genetron 22 (monochlorodifluoromethane).

Construction will begin immediately and is scheduled for completion early in 1961. "The Elizabeth, N. J. site has been chosen to enable us to provide maximum service to consumers located along the eastern seaboard," Frank J. French, General Chemical Div. president, noted.

CARRIER CLIMATE CENTER

Another Carrier first! Dramatic Climate Center enables the homeowner to tell his weather at a glance, dial the climate he likes best, also make sure his air conditioning system is operating efficiently and economically. All this from an 8 x 14 inch satin aluminum panel that installs easily between the studs in any room. An exclusive for Carrier dealers!



CARRIER HEAT PUMP WEATHERMAKERS

The line is complete from ½ ton to 10 tons. It includes a Portable for a single room, one-piece units for smaller homes and two-piece models for larger homes. The larger Carrier Heat Pump Weathermaker* models feature "Climate Balanced Design," which provides maximum working efficiency over the entire range of year-round temperatures.

Whether it's gas, oil or electric heat, only a Carrier dealer blankets the residential field with a complete line of models for every need.

Completeness of line, however, is only part of the picture. A Carrier dealer also has a steady stream of new products to offer—products that lead the field in technical developments. Latest example: the Air Purifier!

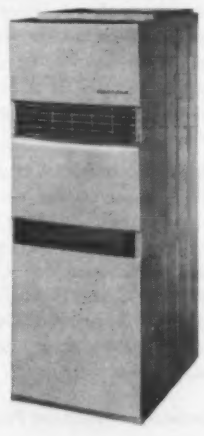
What's more, Carrier backs its dealers with everything to build greater volume—engineering help on difficult jobs, training in modern techniques, special credit on inventory, liberal financing help, promotional help—many more.

Some of the residential heating products are shown here. There are many more. And there is also a complete line of Carrier residential air conditioners—as well as complete lines for both commercial heating and air conditioning. No wonder the Carrier franchise is the most valued in the industry! Interested? For information, call the Carrier distributor listed in the Yellow Pages. Or write Carrier Corporation, Syracuse 1, New York.

CARRIER GAS AND OIL FURNACES

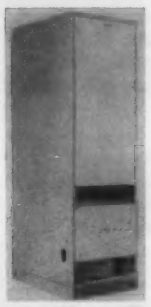
Carrier Winter Weathermakers are designed from the ground up as "Furnaces with a Future"—for the easy addition of summer cooling at a later date. The casing is amply wide for cooling air flow. All models are approved for .5-inch static pressure. Installs easily in utility room or closet near living areas. Extremely quiet because the new Carrier Floating Blower Mount suspends motor and blower inside the blower housing, eliminating vibrations. Four models: upflow, downflow, loboy and horizontal. Gas-fired bonnet capacities: 56,000 to 160,000 Btuh. Oil-fired: 84,000 to 185,000 Btuh.

*Reg. U.S. Pat. Off.



Majestic Bows Compact Gas Furnace

● A new compact gas furnace, measuring 18 in. in width and designed especially for alcove and closet installation, has been announced by the Majestic Co., Dept. AH&RN, Huntington, Ind.



Designated the model 100 and part of a new "Starline" series, the new warm air furnace is being produced in upflow or downflow style and features a full-capacity, belt-driven blower with a ¼-hp. motor suitable for use with air conditioning, according to the company.

"To minimize contraction and expansion in the new unit, Majestic engineers have designed an integral square-to-round heat exchanger that is welded directly to the frame, eliminating gaskets and the possibilities of leakage," it was stated.

"The furnace is fired by a patented, ribbon-type, single-burner of multi-section port construction. It is specially designed for the heat exchanger of this particular unit. An air deflector in the small, round burner pouch directs secondary air under the burner to provide maximum burner efficiency."

The unit is completely enclosed, while all components are easily accessible.

Want More Details?

ADDITIONAL details on products that are described on these pages may be obtained by writing the manufacturer at the address given in each What's New story.

Tell him: "AH&RN sent me!"

Ice Storage Bins Have Aluminum Exteriors

● Three models of an aluminum exterior ice storage bin for use with automatic ice machines have been introduced by the Roy Follett Corp., Dept. AH&RN, Phillipsburg, N. J.

The models have storage capacities for 250, 400, and 600 lbs. of ice.

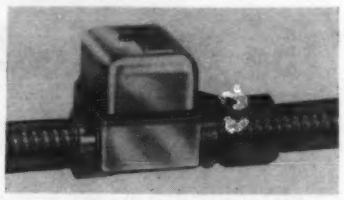
"The highly styled exterior shell of the new models is made of pebbled aluminum, and no raw edges or screws are visible, as they are hidden in the internal structure," it was stated. "The entire ice weight and machine section is supported by an internal frame of heavy-gauge welded steel.

"The exterior top of the bins is made of polished 18-8 stainless steel and Follett's leak-proof liner is constructed of stainless steel.

Adhesive Overlay, Opaquing Medium

● "Para-Paque," a multi-use overlay and opaquing medium, is being offered by Para-Tone, Inc., Dept. AH&RN, 512 W. Burlington Ave., P. O. Box 136, La Grange, Ill.

"Para-Paque, an adhesive-backed, transparent film, dimensionally stable, offers a solution to artists, draftsmen, blueprinters, engineers, architects, and photo engravers for masking, blocking, or opaquing in their preparation of artwork, blueprints, photo negatives and positives," it was stated.



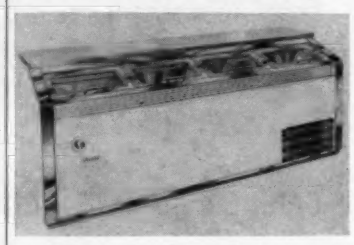
Fluid-Flow Motor Control Mounts In Any Position

● Development of a fluid flow motor control primarily designed as a pumping unit protection switch has been announced by Payne Engineering Co., Dept. AH&RN, Pine Hall, N. C.

This model 27 control can protect a large number of hydraulic systems having components which depend on minimum fluid flow rate for lubrication, cooling, etc., it was stated. The unique time delay feature allows fluid to start up and attain normal flow rate before taking over control of the electrical circuit, according to the company.

Among announced features of the control are that it can be mounted in any position anywhere in the pump pressure line, offers little flow restriction, and has packless flow sensing takeout.

Maximum working pressure is 100 p.s.i. (higher pressures on special order); maximum g.p.m.—12.5; minimum g.p.m.—.33.



Savage Redesigns Counter-Top Cabinets

● A redesign in its line of counter-top (check out) merchandisers has been announced by the Savage Ice Cream Cabinet Div. of C. V. Hill & Co., Inc., Dept. AHRN, 360 Pennington Ave., Trenton 1, N. J.

Two models, newly identified as a GCT-72 (6 ft.) and GCT-96 (8 ft.), now feature hide-away slide-up, glass doors with large "easy grasp" handles. Door frames are of lightweight extruded aluminum and are designed to withstand years of rugged, day to day customer service, the company said.

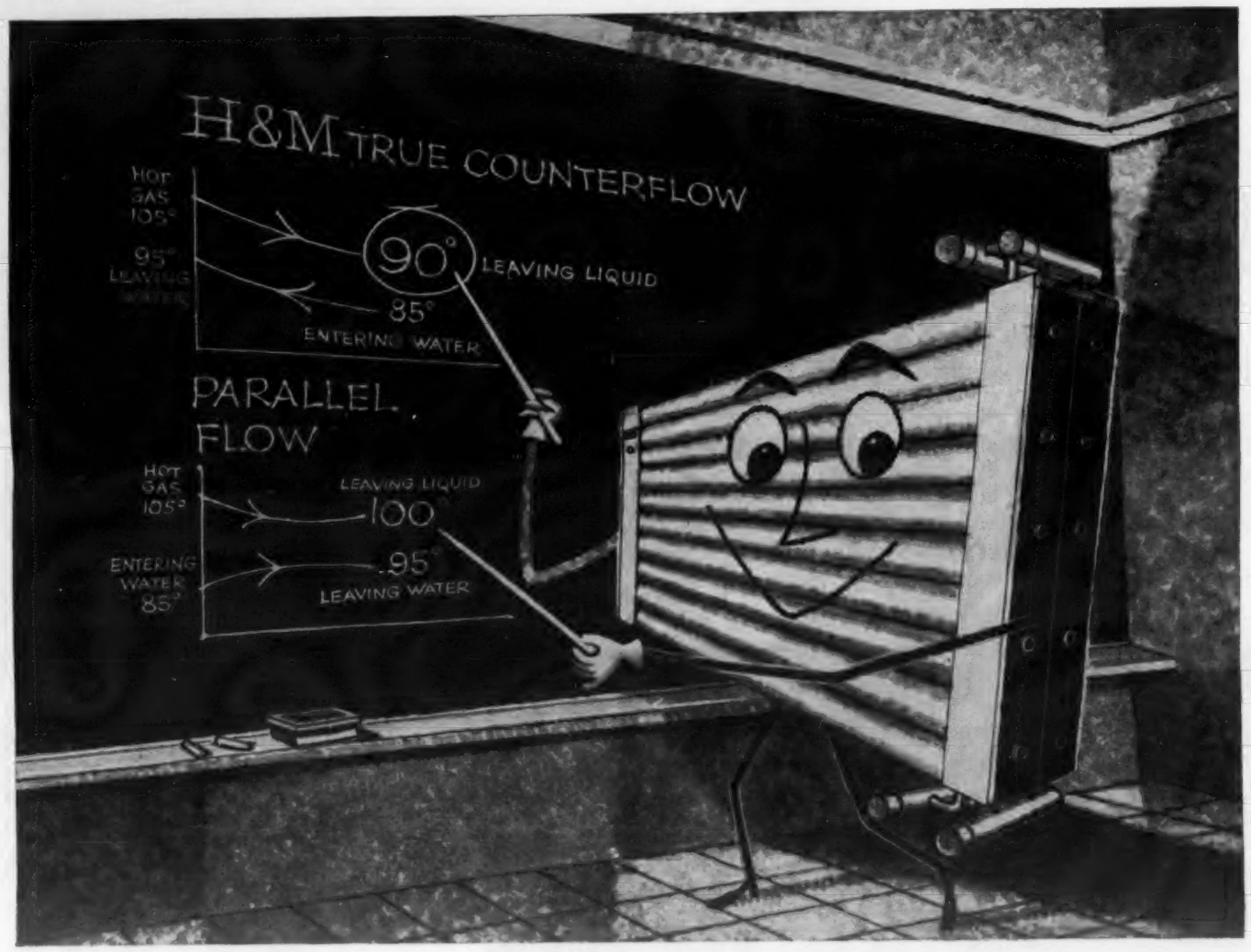
Also incorporated into the new design is new exterior styling, highlighted by a color band located at the "product buy" level. It is said the new color trim is designed to attract the shopper's eye "and, as it is closely associated with product level, creates the impulse to buy ice cream."

Claim Flame Resistance For Adhesive Tape

● What is claimed to be "an extremely flame-resistant" cloth adhesive tape for heating ductwork connections and insulation taping is being produced by Arno Adhesive Tapes, Inc., Dept. AH&RN, Michigan City, Ind.

Known as "C-506 Flame Resistant Ductape," it is made of specially treated and coated cloth, in tan and aluminum colors, with a high-tack, low-creep adhesive that is rubber-based and pressure sensitive, it was pointed out.

"The tape meets the requirements of ASTM Specification D-626 on fire-resistant fabrics," the company said. "The thermo-setting nature of the adhesive makes it ideal for ductwork taping, since normal heats will not loosen or soften it."



BEFORE YOU BUY, THINK:

Will you get adequate subcooling from your condenser?

You will if it's an H&M water-cooled condenser with true counterflow heat exchange

In Halstead & Mitchell water-cooled condensers the refrigerant and cooling water are introduced in true counterflow, as shown in the chart. Test results indicate an average of 15 degrees of subcooling in H&M condensers. Liquid refrigerant leaves at a lower temperature and system capacity is increased about ½% for each degree of subcooling without additional power input.

H&M condensers feature double-tube design, seamless copper tubing, brass headers. End plates are easily removed for quick, safe, *mechanical* cleaning. Water tubes are generously sized for low pressure drop and minimum maintenance. Available in ½ to 25 ton capacities, condenser types are Standard (½" and ⅝" O.D. water tubes), Heavy Duty (⅝" O.D. water tubes), and Sea Water (¾" O.D. cupro-nickel water tubes), and are U/L approved. Order them from your refrigeration wholesaler and use them singly or on racks. Halstead & Mitchell, Bessemer Building, Pittsburgh 22, Pa.

H&M WATER-COOLED CONDENSER WITH TRUE COUNTERFLOW

HM Halstead & Mitchell

Water-Cooled Condensers • Cooling Towers • Air-Cooled Condensers • Finned Coil Products

Thermostat Features 'Level-Bubble'

● A new thermostat, the "D'LUXline," offered in heating, cooling, and heating-cooling types and featuring a "Level-Bubble," has been announced by White-Rodgers Co., Dept. AH&RN, 1209 Cass Ave., St. Louis 6, Mo.

The company said the exclusive Level-Bubble built into the wall mounting plate "assures a perfectly level mounting for exact calibration, while cutting installation time."

Styling features "clean, straight" lines. This contemporary look is carried through in color and material. The D'LUXline's base and snap-on cover are Terra Beige plastic, while the clear plastic-covered face has markings and numerals of polished gold. The thermostat background is soft white, and the dial background is nutmeg birch veneer.

D'LUXline features include sealed mercury contacts. "Both heating and cooling types are anticipated, to afford operating differentials as narrow as ½° F. (heating) and 1° F. (cooling)," the company said. "An easy to read dial sets heat anticipation to match any primary control from .35 to 1.1 amps. (standard); cooling anticipation is fixed, 0 to 1.5 amps. (standard)."

A "comfort zone" is marked in 2° increments from 70° to 80°. The bimetal thermometer can be quickly recalibrated with a small screwdriver from the rear of the snap-on cover, it was stated.

Lightweight, Compact Boiler Introduced

● A new lightweight, compact boiler with a maximum input rating of 80,000 B.t.u. is being offered by the Permaglas Div., A. O. Smith Corp., Dept. AH&RN, P. O. Box 28, Kankakee, Ill.

Designated model HW-80, the gas-fired boiler weighs 88 lbs. and is 27 in. high. It is designed for a maximum heat loss load of 57,600 B.t.u.h. and is intended for small and medium-sized homes or to supplement larger central systems.

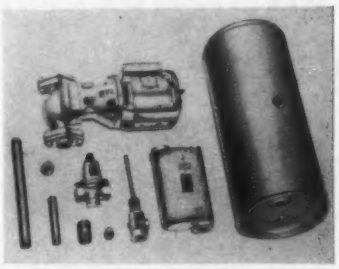
Package Said To Cut Hydronic Installation Costs

● A "sharp cut-back" in the time and money involved in properly installing hydronic accessories used with a boiler reportedly has been achieved by a new all-in-one installation package which is now available from Bell & Gossett Co., Dept. AH&RN, Morton Grove, Ill.

The new "Hydro-Flo Pak" contains all the hydronic components normally used around the boiler, plus pre-engineered and pre-cut pipe fittings for fast, simple installation, the company said in announcing the new kit.

Included in the "pak" is the B&G booster pump, the B&G "Airtrol" system, and a choice of the proper B&G relief valve or "Flo Control" valve, or both. A compression tank is also included but is furnished separately.

"Key purpose of the pak is to provide on the job all the right parts and equipment to make a trouble-free installation quickly," it was explained. "It takes the



guesswork out of estimating, cuts installation time from hours to minutes, avoids costly call-backs, and eliminates unnecessary trips to the shop.

"The parts in the Hydro-Flo Pak are engineered to fit all types of boilers and can be installed to fit any installation: side outlet boilers (upfeed or downfeed), top outlet boilers (upfeed or downfeed), right or left-hand installations. Hydro-Flo Pak's components are designed for residential hydronic systems up to 90,000 B.t.u.h. capacity," according to the manufacturer.

Combined Gas Heating, Electric Cooling

● A combination gas-fired heating, electric refrigerated cooling unit housed in one compact cabinet has been announced by the Refrigeration Dept., International Metal Products, division of McGraw-Edison Co., Dept. AH&RN, P.O. Box 13268, Phoenix, Ariz.

It is sold under the trade name "Continental Combo" in 2 and 3-ton sizes. Both units are self-contained with an air-cooled refrigeration system.

The B.t.u. rating of the 2-ton model is 24,657 B.t.u.h. and the 3-ton model 37,798 B.t.u.h. at 95° ambient, on the cooling side, with a 50,000 B.t.u.h. input for the 2-ton model on the heating side.

Features include an AGA-approved furnace with high efficiency aluminized heat exchanger tubes and safety pilot shut-off of the thermocouple type, it was stated. Units are completely insulated with all components designed for quiet, smooth running operation, which includes the spring-mounted

compressor and a large, deep pitched condenser fan.

"The 'Combo' design has proven popular for small commercial or apartment installation, mounted on the roof, under eaves, through walls, and is especially adaptable for perimeter air conditioning with a flexible bottom or side return," the announcement said. "The adaptability of the return makes it ideal for mobile homes."

More details on the products described on these pages may be obtained by writing the manufacturer at the address given in each story.

"Zephyr"-25 "Zephyr"-50

New "Zephyr" containers for "Freon" —lighter in weight, easier to handle

These new "Zephyr" containers for "Freon" refrigerants are shorter, wider, lighter—so much easier to handle that a 50-lb. size is now practical. You can use them upright or inverted without special blocks or stands . . . stack them one on top of the other . . . stand them upright in your truck.

A permanent collar not only protects the valve, but also serves as a built-in carrying handle. And no wrenches are needed, because these new containers also have a new-type handwheel valve. Both "Freon-12" and "Freon-22", the premium-quality refrigerants, are available in these new Du Pont "Zephyr" containers.

New top and valve for standard 25-lb. cylinders

Now, Du Pont's new "Spintop", for standard 25-lb. cylinders, combines a convenient carrying handle, valve protector and stand, all in one. Free to rotate, the "Spintop" provides easy access to the valve. And the valve itself is a handwheel type that includes a special, spring-loaded pressure relief valve for added safety.

Complete family of containers* for "Freon" refrigerants includes the new "Zephyr" types; standard 10, 25 and 145-lb. containers; and the new "Spintop" cylinder. Your *leading* air-conditioning and refrigeration wholesaler stocks the type that suits your needs best. Call him today for your order of "Freon" refrigerants.

**1- or 2-lb. "Can-O-Gas" containers of "Freon" refrigerants are available from the Virginia Smelting Co., our nationwide sales agent and authorized repackager.*

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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

FREON®
premium quality
refrigerants

Engineer Challenges Data on Dehumidification-Reheat System

DETROIT — Reaction to the NEWS story on Sears' humidistatically controlled room air conditioner (May 16, 1960) came from manufacturers and utilities.

The original article described the "Coldspot" units which make application of a Ranco-developed dehumidification-reheat system to enable the user to control both temperature and humidity in the conditioned area.

The Sears units make use of a four-row evaporator so connected as to make possible two separate refrigeration circuits. On cooling duty, all four rows act as cooling coil; on dehumidification-reheat, the first two rows form a cold coil; the latter two rows are heated with by-passed hot gas.

Glydewell Burdick, Wisconsin Power & Light Co., comments, "When the implications as to the sale of electric energy are understood, it should attract general interest throughout the electricity supply industry. When the public understands what this type of equipment will bring them, in terms of real air conditioning comfort, they will want it, and that only."

But Burdick questions the data which appeared in Table 1. "You show water rates of 2.7 lb./hr. and 3.5 lb./hr. for moisture removal, on the cooling and reheat cycles, respectively. The next line shows test conditions of 80° F.-95° F. and 80°-80°. I assume these indicate the temperatures of air entering the evaporator and of air entering the condenser.

"What is missing is data on either dewpoint or wet-bulb temperatures of air entering the evaporator. Without knowing the moisture content of the air entering the evaporator, the moisture removal rates have little significance."

C. N. Hutter, air conditioning department, Sears, replies, "The relative humidity of the air entering the evaporator under both test conditions is 50%. This would make the dewpoint of evaporator air 59.5° F., or a wet-bulb temperature of 67° F."

Table 1—Summary of Humidity Control Operating Data (Sears)

Model 6019 (1 Hp., 115 V., 12 A.)

	Cooling Cycle	Dehumidifying and Reheat Cycle
Capacity	11,000 B.t.u.h.	4,000 B.t.u.h.
Water rate	2.7 lb./hr.	3.5 lb./hr.
Test conditions	80° F.-95° F.	80° F.-80° F.
Wattage	1325	1050
Amperage	12.0	9.7
Evaporator Coil #1		
Inlet temperature	50° F.	44° F.
Mid temperature	49° F.	39° F.
Outlet temperature	65° F.	57° F.
Evaporator Coil #2		
Inlet temperature	50° F.	136° F.
Mid temperature	48° F.	92° F.
Outlet temperature	48° F.	91° F.
Suction Line	60° F.	66° F.
Condenser Coil		
Inlet temperature	174° F.	135° F.
Mid temperature	116° F.	92° F.
Outlet temperature	106.5° F.	84° F.

* * *

Table 2—Data Obtained In Reheat Study by Fedders Corp.

	Normal Cooling	Reheat Operation
B.t.u.h.	100%	27.0%
Watts	100%	86.2%
B.t.u./watt	100%	31.4%
Pints Moisture/hr.	100%	46.4%
Pints/watt	100%	53.5%

Basic disagreement with the principle of dehumidification-reheat came from G. E. LaPorte, assistant director of engineering, Fedders Corp., who claims that many designers and engineers "have explored the reheat idea and discarded it as being impractical for room air conditioner use."

Next week, a Sears spokesman counters the objections raised here by LaPorte.

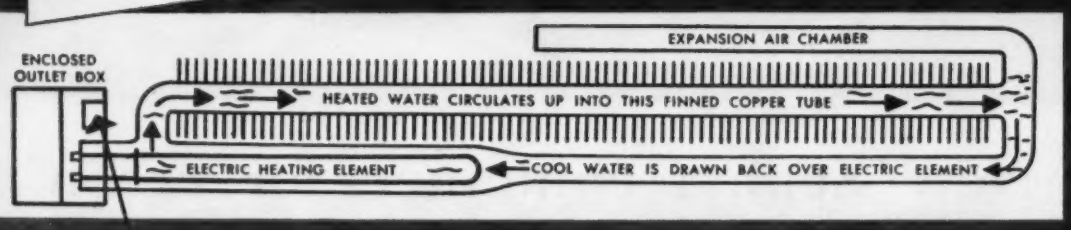
The data presented in the article, states LaPorte, is misleading since "it is not given for the same test conditions. Unless temperature conditions are the same for the two methods of operation, a true comparison cannot be made."

The engineer listed data (Table 2) obtained several years ago by his company, "with refrigerant circuitry exactly as pictured in the NEWS article.

"This data was obtained at 80° F. dry bulb, 67° F. wet bulb

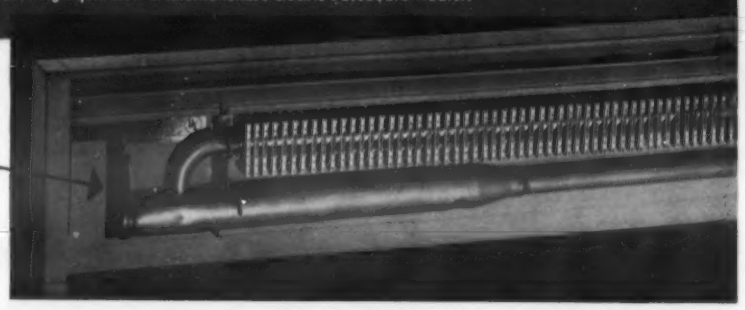
INTERNATIONAL Chooses KLIXON Snap-Acting Thermostats...

For accurate, dependable control, ease of application, low cost in their Hot Water Electric Baseboard Heaters.


ENCLOSED OUTLET BOX
EXPANSION AIR CHAMBER
HEATED WATER CIRCULATES UP INTO THIS FINNED COPPER TUBE
ELECTRIC HEATING ELEMENT
COOL WATER IS DRAWN BACK OVER ELECTRIC ELEMENT

Schematic drawing showing liquid flow in International's Electric Baseboard Heater.

KLIXON F.T.C. Type 204 Thermostat used as a temperature limit control.



The International electric baseboard heater utilizes circulating liquid in a self-contained system.

In developing these heaters, International Oil Burner Co., Electric Heat Division, 3800 Park Ave., St. Louis, Mo., chose KLIXON type 204 Thermostats to provide operating temperature limitation at the optimum level.

International also uses KLIXON Snap-Acting Thermostats in many other well known types of heating equipment.

There are good reasons why leading original equipment manufacturers choose KLIXON Thermostats.

First and foremost, KLIXON Thermostats insure accurate temperature control according to "specs". Next, the dependable performance of KLIXON Thermostats means trouble-free service. Switch action is clean and unaffected by mounting position even when subjected to shock and vibration. Accurate fixed temperature settings calibrated at the factory prevent tampering by unauthorized persons.

M & C Field Engineers will gladly help you make test applications of KLIXON Controls at your request. Send for technical data bulletins on KLIXON Commercial Thermostats and get acquainted with the low cost applications possibilities on your products. No obligation, of course.

TEXAS INSTRUMENTS
INCORPORATED
METALS & CONTROLS DIVISION
2408 NORTH MAIN ST. • VERSAILLES, KENTUCKY

Spencer Products: Commercial Controls Department

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• Charging Stations • Charging Boards • Portable Refrigerant Measuring Tubes • Charging Hoses and Valves • Oil and Methanol Measuring Tubes • Quick Couplers • Tank Stands • High Vacuum Pumps • Manometers • Vacuum Gauges

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on the room side, and 95° F. dry bulb, 80° F. wet bulb on the condenser side. Note that for the various parameters explored, normal cooling was considered baseline, with 100% performance."

LaPorte concludes that his data indicates, "in every respect, extremely poor performance during heat operation. Note that the moisture removal during reheat was less than half that obtained in normal cooling.

"This is easily explained, since, in a reheat circuit, only half the evaporator is available for knocking out moisture. Note, also, that for every pint of water removed, approximately twice as much power is required for the reheat unit, thereby indicating poor efficiency of operation."

Holding that the "cold clammy" feeling described in the May 16 article is normally caused by an oversized unit, LaPorte says the only answer is a proper size unit for a given load, with multi-speed motors for adjustment to lighter loads.

"Such a unit has shorter off-periods, therefore there is little opportunity for the room to regain moisture from the evaporator, and a comfortable condition prevails," he concludes.

Universal Cabinet Names James McKee In Southern Area

ST. LOUIS—Appointment of James J. McKee as a regional manager for the Universal Cabinet Div. of Universal Metal Products Corp. has been announced by Elmer Hoefle, vice president and general sales manager for Universal Cabinet.

Universal Metal Products is a subsidiary of Universal Match Corp. Both corporations and the cabinet division have headquarters in St. Louis.

McKee will be in charge of sales and distribution of the complete line of Universal ABC refrigerated display cabinets for the ice cream and frozen food industries in Georgia, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma, Texas, New Mexico, Arizona, and Colorado. McKee, for 14 years prior to joining Universal, was with Swift & Co.

Bastian-Blessing Catalog Covers 'Viewmatic' Case

CHICAGO—A catalog covering its new "Viewmatic" stainless steel display case is available from The Bastian-Blessing Co., 4203 W. Peterson Ave., Chicago 46, Ill.

A four-page, illustrated brochure, Catalog S-315 describes the four models available and shows how the case can be mounted on the wall with the mounting strips which come with it.

Available in a variety of colors, with mirror backing tilted for visibility from any height and well illuminated, the case meets the requirements of the National Sanitation Foundation, according to the company.

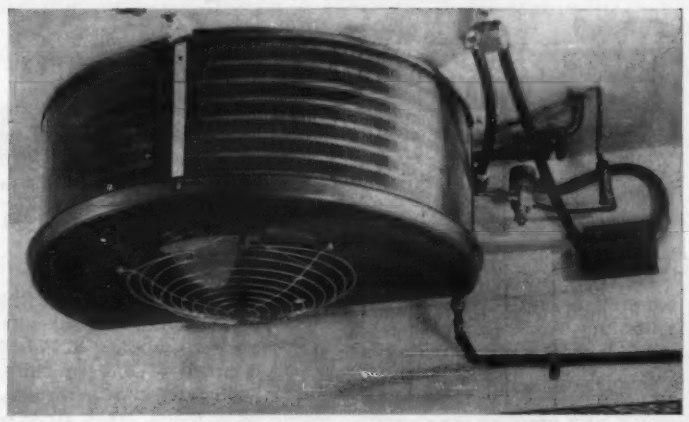
Denver-Hilton Installs 28 Larkin 'Humi-Temps'

Both High and Low Temperature Units Used In Walk-Ins

DENVER—Highly-specialized refrigeration systems are required for the daily operation of a modern hotel. This is demonstrated in the new Denver Hilton hotel, a towering structure which was recently completed by Webb & Knapp Construction Corp.

No less than 23 separate walk-in refrigerators supply the Denver Hilton with proper cold storage for everything from meat to mangos.

The wholesaler and contractor worked closely together in planning and selecting refrigeration equipment. Temperature Engineering, Inc., of Denver, one of the major refrigeration contractors in Colorado, was the contractor. Refrigeration Distribution Corp. of Colorado was the wholesaler.



LARKIN HALF-TURRETT HUMI-TEMP in dairy products cooler, one of 23 walk-in refrigerators equipped with 28 Larkin high and low temperature Humi-Temps in the Denver Hilton hotel, Denver.

More than 900 man hours were required for the systems which used 5,000 ft. of copper tube. Twenty-eight Larkin "Humi-Temps," both high and low temperature, manufactured by Larkin Coils, Inc., of Atlanta, provide the refrigeration.

The 22-story building also required 125 miles of electric conduit, 500 miles of electric wiring, and 10,717 tons of steel.

Hill of Canada Names Adams

BARRIE, Ont., Can. — Appointment of Harold Adams as general manager in charge of operations, C. V. Hill of Canada, Ltd., has been announced by G. J. Doyle, president.

REVERE

DRYSEAL

COPPER REFRIGERATION TUBE

Not one but two crimps are made in each end of DRYSEAL. This is the final step in manufacturing, that immediately follows a special cleaning and dehydrating operation, which keeps dirt and moisture from entering the tube.

The seal is made in such a way that the diameter of the tube does not change, which permits DRYSEAL to be passed through any opening large enough for the tube itself.

As for bendability—the soft temper of the copper used in DRYSEAL allows you to make the most intricate bends by hand. And its ductility and soft temper make it extremely easy to flare for compression fittings without danger of splitting. Economical tube sizes range from ⅛" to ¾" O.D.

Also you'll find the job-size, 50-foot one-coil pack easy to handle, light weight, economical.

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REVERE

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Mills: Rome, N. Y.; Baltimore, Md.; Chicago, Clinton and Joliet, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Brooklyn, N. Y.; Newport, Ark.; Ft. Calhoun, Neb. Sales Offices in Principal Cities, Distributors Everywhere.

Apartment House Air Conditioning Forum

(4) Questions, Answers from 'Customer's Forum'

IN THIS CONCLUDING instalment on the "Customers' Forum" on apartment house air conditioning held recently by York Div., Borg-Warner Corp., questions are answered by forum participants. John Pruyn, architect and planning consultant, and George P. Nachman, president, Spohn Heating & Ventilating Co., Cleveland, veteran mechanical contractor were principal speakers.

Question: Why don't you want the sill line higher?

Pruyn (Replying):

This is purely a matter of architectural esthetics. We plan to keep the sill line low so that a greater window area opens up to the outside, I think you'll find that 28 in. is pretty nearly the maximum.

I'd like to make one comment that came to mind while I was listening to Mr. Nachman. In the buildings that we are building, and this is true of New York almost entirely, I'd say 90 to 95% of the apartment buildings are of precast concrete or flat slab construction. We put a smooth coat of plaster on the underside and that becomes a ceiling. By doing this we hold to about 8 ft. 9 in., floor to floor and about 8 ft. 2 in. floor to ceiling. This is even in $60 a room apartments in New York City.

Now in other parts of the country, perhaps you don't have quite the same high cost problem. It isn't just a matter of low cost, this is standard construction in New York. This would be a problem for a central system. I'm extremely interested in Mr. Nachman's comments on it, but there is an additional problem where you don't have the steel joist construction that from a practical standpoint we have to contend with.

Question: Without giving away any trade secrets, how much per apartment do you allow for air conditioning in a several hundred room building? How much per suite?

Nachman (Replying):

I can't break it down. But our contract on this 250 suite building was about $275,000 which is about $1,100 per suite. That included the sunroom, coffee shop, lobby, fresh air system, the ductwork. It also included the bathroom and kitchen ventilation, the roof with its 22 or 24 power roof ventilators.

The vertical shafts are masonry, so that all we connected to was the top of the masonry shaft which was in the attic level and went from there on up with sheet metal and connected with the power roof fans.

Incidentally, that's another thing that's important in this design. I'm sure Mr. Pruyn has the same idea. I don't know what you're using for your kitchen and bathroom exhaust, but we find noise there to be a very serious problem and we're using the very slow-speed, belt-driven roof ventilators which I have found to be the best because you get some gravity circulation through them when they're not operating.

As far as the costs are concerned, if you take your entire heating system and your room cooler system, at least in Cleveland, you won't be far away.

Slip-In Unit for Rental Purposes Did Not Go Over

You commented about renting to the tenant. There is a unit that is made to be slipped in and out through opening. About 15 years ago Howard Spindler, Harold Day, and I drew the thing all up and the next thing you know somebody came out with one. That would answer the purpose you're talking about and it is for that very purpose—putting in a steam or hot water heating system with a space in the middle so the tenant could put the unit either on a rental or purchase basis and the rent adjusted accordingly. But this has never become popular. Today they're using them in older buildings such as old office buildings.

N. Y. Code Tends To Limit Use of Central Systems

Here's something else I think should be brought out, in justice to everyone. If you have a central air conditioning system with a central compressor in New York, I believe you're required to have a licensed engineer on duty if it's over 50 tons. That works against the central system in New York and therefore it's only the very large apartment that can be built for this equipment and absorb the cost of maintenance.

Fortunately, we have been able to fight this in Cleveland, there haven't been any bad experiences and so far we have been able to lick it. If they ever get to the point where they require a licensed engineer the owner of a 100-suite building won't be able to afford it.

Believe it or not, we have been able to lick it.

Continental
AIR CONDITIONING

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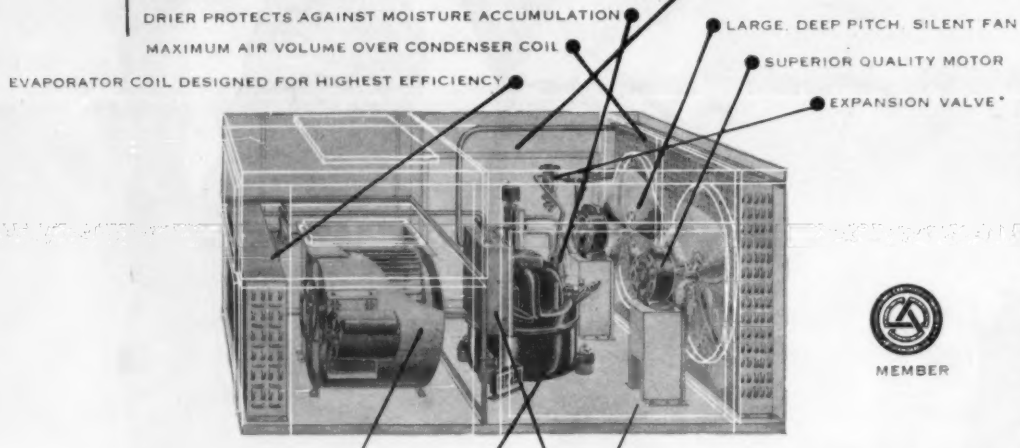
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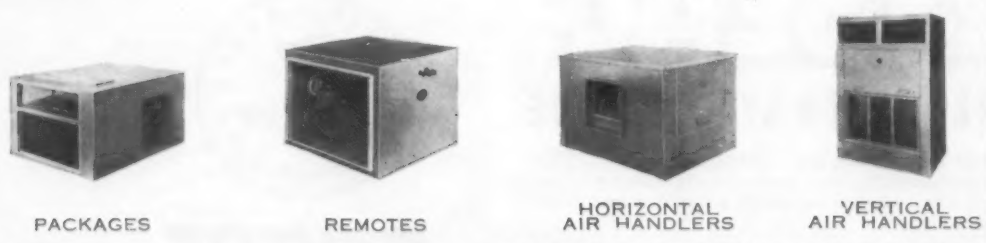

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This set includes 6 nine inch long straight length hex wrenches in sizes ranging from 3/32" to 1/4"

Each wrench is magnetized to enable the user to easily recover fallen set screws. To facilitate the use of these wrenches a master handle with corresponding size openings, is included in each set. This handle is designed to slide to any position on the wrench thus enabling the user to keep as close to the work as is desireable.

As an extra feature this fine set includes 3 Phillips type screwdriver tips, sizes #1 #2 #3 each of which snaps onto the end of the ¼" size wrench.

Packed in a hinged steel box, the hex wrenches are made of hardened chrome vanadium steel. The Phillips type screwdriver tips are hardened steel. All the components of this set are finished to resist corrosion.

For additional information see your Wholesaler or write to Dept. N-18.

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able to teach the commonest type of janitor to push the buttons, we tell him what it's for, we tag everything in beautiful shape, and then we say to him, "You see how this com-

and I hope someday it will become more popular. If we could develop this closet unit system where we had one unit per suite and one control system only, and much simpler piping, from

economy of operation that the three-pipe system does in other types of buildings such as department stores.

Mr. Pruyn has asked a question about cost of operation. We

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These build-
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cost of operation for the air conditioning is an average of $25 per summer per suite. This is included in the rent.

These are luxury-type apartments. The rentals are not too different from those you were just talking about. You're talking about $105 a month for efficiency suites while I'm thinking of one particular building where rentals are $110 a month for an efficiency suite including a garage space and $185 for two-bedroom suites. There aren't any window units in Cleveland going into that type of building.

We're favored by having a fairly decent electrical rate. I took the difference in the electrical bills between the winter and summer. Cooking is electrical and there's a sizeable electrical bill anyhow, so we just take the extra cost of the electricity for the summer months. I've compared that for about five different seasons in this one particular building and it comes up an average of $25 for the whole summer for a whole suite.

I don't think you can do that with window units. I think that the overall efficiency and cost of operation of the combination hot and cold water job such as we have in this building is more than you can do with a window unit.

Of course, it all depends on which came first, the chicken or the egg. We have a very low rate after you get up to a certain point and if you figure that the electrical cooking is at the upper part of the rate, because that is the part you have to use anyhow, and give credit to the air conditioning at the lower rate why, you get my figure. Do it in reverse and you might get something higher.

I just can't conceive of apartments renting at $9,000 a year with window units in them.

(The End)

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st 5,000 valves
and 6,600 plumbing fixtures will be shipped from Michigan.

From Oklahoma City will come better than 1,300 air conditioning units. Four steam boilers, with a capacity of 600 hp. are scheduled for shipment from York, Pa.

There will be four air conditioning machines with a total capacity of 2,000 tons trucked in from La Crosse, Wis. At least 710,000 lbs. of sheet metal will be used in the air system's ductwork.

Once the more than $2,000,000 contract was awarded to his company, Markowitz immediately conferred with Robert L. Turchin, vice president of Morton Towers Co., who is overseeing the construction.

Turchin's schedule called for a new floor being formed and poured every four days at Morton Towers.

"Once we knew what was required of us," explains Markowitz, "we began pulling material out of stock, making sure there was a month's supply on hand.

"Today, we have more than 50 men at the job-site, receiving deliveries every day. Since the building is Y-shaped, they are divided into three crews, each working independently of the other as they continue making new installations in their own wings."

Behind the scenes, Markowitz has his office staff ordering fresh supplies and supervising delivery schedules, even to the point of checking on the progress of each truck in route.

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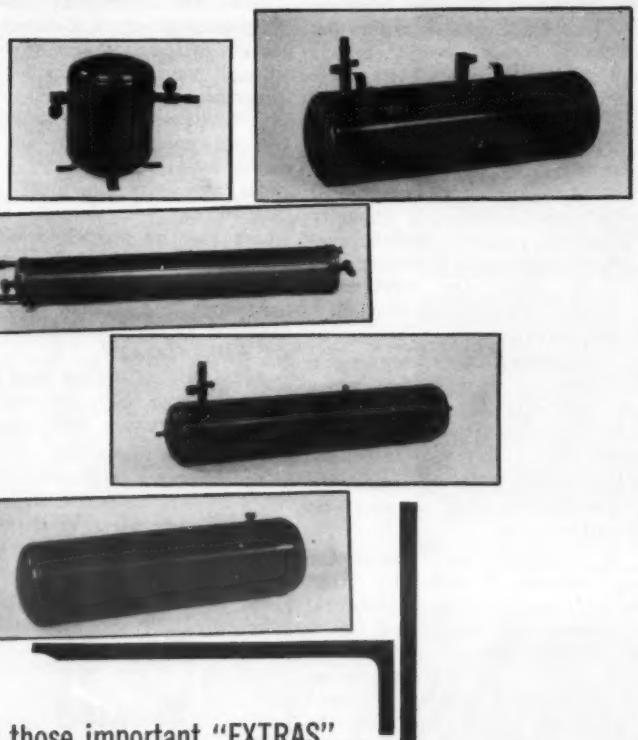

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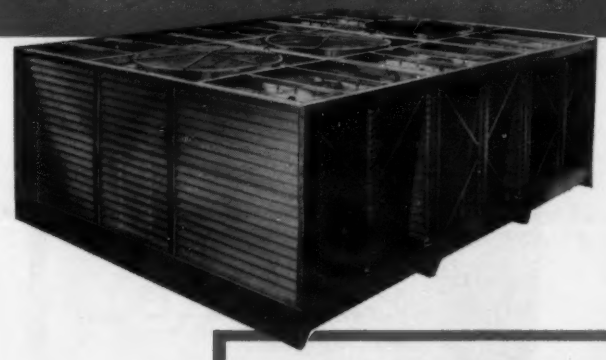

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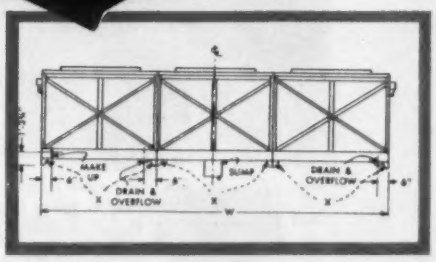

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TECH CENTER

by Frank J. Versagi, Technical Editor

Multizone Air Handling System Coils, Controls (1)

The following discussion of multizone procedures was written by Norbert K. Hall, manager, refrigeration and air conditioning division, Ready Power Co., Detroit. Readers are invited to express their reaction after the last segment has appeared.

For the purposes of this discussion, we can define a multizone system as an Air Handling Unit with cooling coil, usually having a COMMON RETURN AIR PLENUM, several separate SUPPLY AIR duct openings (zone supplies), and a separate motorized damper in each of the supply air openings. The motors for each damper are controlled by a zone thermostat in the conditioned area or zone. The dampers regulate the air quantity flowing over the cooling coil and through the bypass around the coil.

Multizone Units provide zone control at a minimum cost and are suitable for combination heating-cooling systems. As with all good things, there are also some special problems. Properly considered, these problems can be handled satisfactorily: These problems are:

PROBLEM #1: *Excessive Motorized Damper Hunting* — caused by changes in cold deck air temperature as air quantities are varied across the cooling coil (especially during load conditions below 50%). This is especially noticeable on systems having electric fixed speed compressors with limited capacity reduction. When one zone damper increases the amount of air by-passed around its section of the evaporator coil (and thereby decreases the loading on the evaporator coil), suction pressure and evaporator coil temperature drop. The colder coil causes the air leaving the coil (all the way across the cold deck) to drop in temperature and supply a colder air mixture to each of the other zones—each zone must then "rebalance"—and this goes on continuously. The zone, under these conditions, being supplied with air which is colder or warmer than that which the zone stat is calling for.

PROBLEM #2: Since it is quite possible that all zone dampers could reduce the total air quantity across the evaporator to a small fraction of its full flow rate, this means that it is possible that standard expansion valves can be operated at refrigerant flow rates substantially below that where they function properly. The valves then hunt — alternately flooding back to the compressor and then starving the coil. This can eventually damage any compressor.

There are several good solutions to both of the above problems, however, and the merits of each should be examined carefully for its applicability to the specific installation being designed or analyzed.

In regard to Problem #1: ZONE DAMPER HUNTING — Since this is caused by evaporator coil temperature fluctuations, it can best be prevented by using a compressor with a considerable amount of capacity reduction; this will result in a relatively constant evaporator coil temperature regardless of load condition. The greater the range of capacity modulation and the finer the steps of unloading, the more stable the evaporator coil temperature will be and the less hunting there will be on the damper system—conditioned area temperature will be more stablized. Most modern compressors have a considerable amount of capacity reduction and these are especially suitable for maintaining stabilized conditions with multizone units, since their use results in a minimum amount of evaporator coil temperature fluctuation.

In regard to Problem #2—(EXPANSION VALVES HUNTING at low loads and causing floodback to compressor.) This can best be avoided in the design stage by proper coil and valve selection and can also be corrected in the field where coil or valve has been improperly selected.

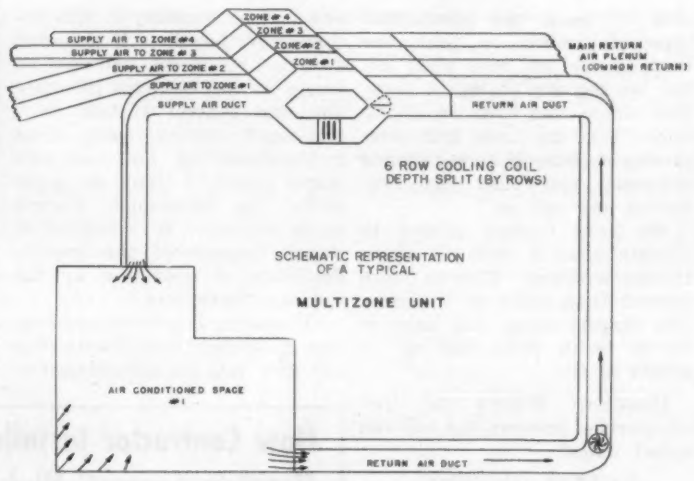
ZONE # 4
ZONE # 3
ZONE # 2
ZONE # 1
SUPPLY AIR TO ZONE #4
SUPPLY AIR TO ZONE # 3
SUPPLY AIR TO ZONE # 2
SUPPLY AIR TO ZONE #1
MAIN RETURN AIR PLENUM (COMMON RETURN)
SUPPLY AIR DUCT
RETURN AIR DUCT
6 ROW COOLING COIL DEPTH SPLIT (BY ROWS)
SCHEMATIC REPRESENTATION OF A TYPICAL
MULTIZONE UNIT
AIR CONDITIONED SPACE #1
RETURN AIR DUCT

FIG. 1—Multizone coil operation.

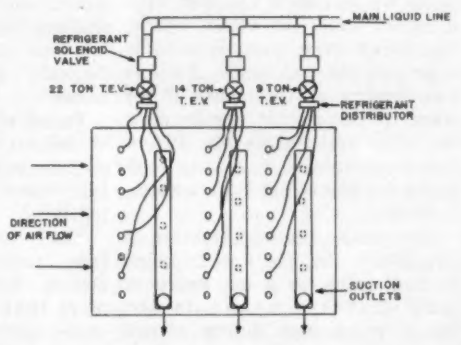

FIG. 2—Typical multizone unit coil with depth row split circuiting.

Hardly anyone questions, these days, that in order to achieve proper humidity control, the compressor and cooling system should be kept on the line via capacity reduction. In fact, some install reheat equipment to prevent dry-bulb temperature from falling too low while the compressor works to lower humidity. Excellent humidity control can be accomplished by using a compressor with a wide range of capacity reduction, properly divided evaporator coils, and a proper control to stage the refrigerant solenoids of each coil section.

EXAMPLE:

Assume we are designing a 45-ton system with five zones and we wish to provide excellent temperature and humidity control:

1. Select a compressor with capacity reduction as great as possible.

2. Specify an evaporator coil which is split by rows rather than split into horizontal sections, one above the other.

A 6-row can be split 2-2-2, 4-2, or 3-3, and some manufacturers supply this as standard equipment. On a 6-row coil, the first two rows handle approximately 50% of the load, the next two handle 30%, and the last two rows handle 20%; so the expansion valve and solenoid for the front two rows (on the entering air side of coil) will be sized for 22 tons. The middle two rows should have a 14-ton valve and solenoid, and the back two rows should be equipped with a 9 or 10-ton valve and solenoid.

An alternate, and acceptable substitute to row splitting, would be face splitting with staggered and dropping tube circuiting. The end result would be nearly the same, that is: the entire face area would remain in operation at low load with only one expansion valve operating. (Fig. 2.)

3. Specify a simple control system which will stage out the solenoids from front to back as the load decreases. ("Front" is the air entering side of the coil.)

Since the aggregate amount of by-passed air is a direct reflection of loading, end switches on each zone motor can be used to position a program motor which will actuate the solenoids (or de-energize them on reduced load).

An averaging ductstat with long 6 or 8-ft. remote bulbs which can be stretched across the cold deck will also be satisfactory.

In operation, the system will function as described below:

AT FULL LOAD:

A. 100% of design heat load exists in area to be conditioned.

B. Compressor unit runs at full loading.

C. Dampers are positioned by room (zone) thermostats so

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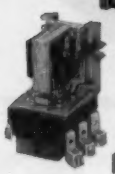

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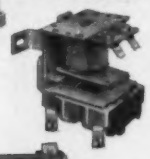

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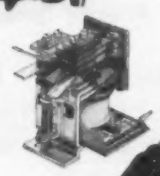

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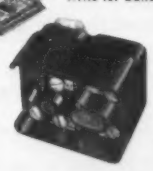

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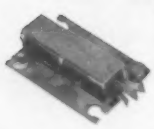

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that all return air is passed through cooling coil.

D. All refrigerant circuits are operative and air leaving coil (cold deck temp) is, say, 63°. This is also the supply air temperature to the zones since no return air is being mixed with cold deck air.

E. Room Temperature is 78°.

F. Return air temperature is approximately 78°.

Assume now that heat gain into the conditioned space gradually drops off due to lowering outdoor temperatures or decreases in internal heat load. As the load decreased, zone stats would begin to move the dampers to by-pass some of the return air around the by-pass circuit. This results in a higher supply air temperature into the room; but since the heat load had fallen off in the conditioned zone, room temperature would remain reasonably steady.

Evaporator coil temperature will remain relatively constant, despite the decreased air quantity across the coils, since the suction pressure actuated compressor capacity control automatically reduced compressor pumping rate to match the load. Other zones will therefore hunt very little because of one zone's actions.

At HALF LOAD *all* expansion valves have throttled to approximately 50% of normal flow rate and are beginning to reach the stage where they will hunt. Loading on the first two rows is about 12 tons—loading on middle two rows is about 7 tons—and loading on the back two rows is about 5 tons—TOTAL LOAD-24 tons.

What has happened to the cold deck air temperature?

As the heat load gradually dropped down, the room thermostats gradually moved until at half load they are now bypassing about one half of the return air around the cooling coil. Since the coil is being maintained at a constant temperature and all coils remain active, the reduced air velocity through the coil causes the air to drop slightly in temperature. (But not as much as would occur on a system without capacity reduction control.)

Now let's examine what happens as the heat gain into the conditioned area falls further to just below 50% of design load: *BELOW 50% OF RATED LOAD:*

A. Room temperature drops slightly and the zone thermostat causes the damper to bypass more air around cooling coil to warm up the supply air.

B. Damper motor end switches cause program motor to de-energize the 22-ton refrigerant solenoid supplying the front two rows of coil. (Or averaging ductstat on cold deck could also accomplish this.)

C. Capacity controls react immediately to begin reducing pumping rate of compressor. However, this reduction will be very slight, because the middle two rows of the coil now become the "front rows" and 78° air instead of 72° air immediately increases the load on the remaining four rows of coil. Load distribution on valves would be about as follows:

Middle Valve: 12 tons load on a 14-ton valve—back row valve now loaded to approximately 7 tons (on a 10-ton valve). Both remaining valves now control refrigerant flow better due to this higher loading.

Coil temperature remains nearly constant because load reduction was very slight when front rows dropped out, and compressor immediately reduced capacity to maintain a constant suction pressure.

D. Air temperature leaving cooling coil remains nearly constant now. With a fixed capacity compressor system it would get colder because coil temperature would lower with the load and the decreased air velocity would afford more time in the coil. However, in this case (with automatic capacity modulation) temperature fluctuation is minimized because, (1) coil temperature doesn't change appreciably, and two rows of coil are now inactive.

Assuming that heat gain in the conditioned area continues to drop—say to 20% of full load over a period of time—the room stats will gradually bypass more and more air around the cooling coil and reduce the velocity of the air flowing through the four remaining rows of coils.

Cold deck temperatures will, of course, decrease gradually because coil temperature is constant but air flow through coil is slower and will, therefore, come off the coil colder. However, temperatures will not drop as much as it would if suction temperatures were also lowering with the load.

When coil capacity drops to where the 14-ton and 10-ton valve are again running about one half load (7 ton and 5 ton) or a total of 2 tons, this is the lowest load that the valves can properly be operated on.

WHEN CAPACITY DROPS BELOW 20%: (Approximately 12 tons)

The damper motors will be approaching "full by-pass" position and end switches can cause the program motor to de-energize the solenoid supplying the center row of coils.

When the center rows drop out, the back 2 rows become the "front" rows and warmer air onto these rows loads up the remaining 10-ton valve to its full 10-ton rating.

As the dampers finally close off almost completely and load on the coil drops to 5 tons, the cold deck stat or the program motor should knock out the remaining refrigerant solenoid, and the unit will pump down and shut off.

It is interesting to note that with this system, the unit has stayed on the line through load fluctuation from FULL LOAD to 5-TONS and provide continuous dehumidification; also, that the expansion valves operated in the upper 50% of their capacity range throughout this variable load run.

(To Be Continued)

Controls Co. of America Opens Wichita Office

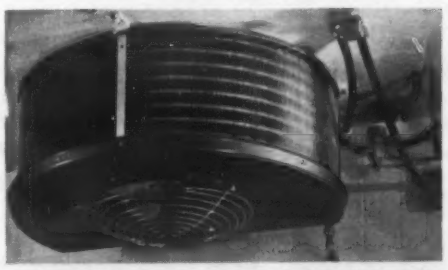
MILWAUKEE—In a bid to strengthen and broaden its midwest sales coverage, the Heating & Air Conditioning Div. of Controls Co. of America has established a new district with headquarters in Wichita, Kan.

Douglas Aitken, a Controls Co. sales engineer who formerly serviced customers in Ohio, West Virginia, and western Pennsylvania, has been assigned here.

Replacing Aitken on his former accounts is Robert Pahlow. A 10-year veteran with the firm, Pahlow previously coordinated all heating and air conditioning sales made through its international subsidiary.

Owner: Webb & Knapp, Inc.; Builder: Webb & Knapp Construction Corporation; Architects: I. M. Pei & Associates; Associate Architects: Rogers-Butler, Charles Sink; Consulting Mechanical Engineers: Jaros-Baum & Bolles; Refrigeration Contractor: Temperature Engineering, Inc.; Refrigeration Wholesaler: Refrigeration Distributor Corporation of Colorado.

Larkin Standard Humi-Temp in fresh fruit and vegetable cooler.



Larkin Half-Turret Humi-Temp in dairy products cooler.

Larkin Baffle Cooler Coils in meat holding and cutting room.

In the handsome, modern Denver Hilton Hotel, there are no less than 23 walk-in refrigerators providing cold storage for everything from salads to sirloins. Twenty-eight LARKIN Humi-Temp units provide ample, accurate temperature and humidity conditions according to the specific needs of each refrigerator. Over 900 man hours were required for the installation.

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ATLANTA 1, GEORGIA

Crane, Ltd. Names J. Barry Austin

MONTREAL, Que., Can.—L. H. T. Clegg, president of Crane Ltd., has announced the appointment of J. Barry Austin as manager of the newly-formed Air Conditioning & Refrigeration Div.

J. B. Austin

Austin was formerly Canadian manager of National-U.S. Radiator Corp., which was acquired by Crane Co. earlier this year.

Clegg stated "the rapid rate of growth in the Canadian air conditioning industry attracted Crane Ltd. to this new field."

Austin will be located at the head office of Crane Ltd.

Copeland Names Heathman Manager In East-Central Zone

SIDNEY, Ohio — Charles M. Heathman has been named east-central U. S. regional sales manager by Copeland Refrigeration Corp.

Heathman

The region is comprised of Delaware, Maryland, northern Virginia, eastern Pennsylvania, New York, New Jersey, and the District of Columbia.

Since 1958, Heathman has been a partner in the Heathman-Clark refrigeration sales and service firm located in Gainesville, Ga.

Part of Ballistic Missile Program

Aug. 12 Meeting To Study Environment Control for 'Minuteman' Facilities

LOS ANGELES—The Ralph M. Parsons Co. here, engineers and constructors, announced that it has been requested by the Air Force Ballistic Missile Div. to arrange a meeting with all interested industry representatives regarding an environmental control systems reliability program for operational "Minuteman" facilities.

The company, which is associate architect-engineer taking part in the design of the facilities, said this meeting will be held at The Biltmore hotel, Los Angeles, on Aug. 12 to explain the systems in detail. It said requests for proposals for a limited engineering and development program will be issued at the meeting.

A prerequisite to participation in this program is attendance at this meeting, according to the announcement. Intention to attend, with the names of attending representatives, should be filed with Hilary Zimont, 617 West Seventh St., Los Angeles 17, Calif. (telephone: Madison 9-2484) no later than 5 p.m., Aug. 10.

In providing a description of the environmental control systems requirements for the operational Minuteman facilities, the Parsons company said that in the near future, the U.S. Air Force "will establish the first three operational Minuteman squadrons in the area surrounding Malmstrom Air Force Base near Great Falls, Mont.

"Of particular importance in these facilities are the environmental control systems," the company said. "These systems maintain temperature and humidity within the underground facilities within limits which will prevent deterioration of electronic equipment therein.

"Reliability of the environmental equipment is of utmost importance, since departure from a relatively narrow range of air temperature and relative humidity will result in an inoperable status for the affected facility."

After listing salient features of the environmental control systems, the announcement continued:

"The majority of the equipment will be housed in above-ground buildings, connected via ductwork to the underground structures. Some air handling equipment will, however, be located in the buried structures.

"The equipment will be incorporated into factory assembled packages wherever possible in order to minimize field fabrication and installation work.

"The reliability requirements for the environmental control systems establish a mean time between failure of 14,000 hours for these systems. Mean time between failures (MTBF) may be defined as the number of total hours of running time, without maintenance, for a system, or group of systems, divided by the total number of failures occurring during that time.

"It is believed that a system reliability of 14,000 MTBF can be attained, using presently available commercial components. However, considerable care must be used in selecting these components and some equipment may require a limited amount of upgrading.

"In order to achieve the required reliability for this environmental control equipment, the Air Force Ballistic Missile Div. is considering the award of a limited engineering and development contract. It is anticipated that the successful completion of such a contract will be followed by a contract to supply and install this equipment at the operational sites."

Epley Will Manage Advertising for Chrysler Airtemp

DAYTON — Lee Epley has been named advertising manager for Chrysler's Airtemp Div.

L. Epley

Epley, who begins his 19th year at Chrysler this month, replaces Arthur L. Foster, who resigned to join an advertising agency in Bloomington, Ill. Richard R. Routh, Jr., advertising and sales promotion director, announced the appointment. Epley has been sales promotion manager at Chrysler Airtemp since December, 1959.

Routh also announced the appointments of Carl T. Miller to succeed Epley as sales promotion manager and John F. Zaino to succeed Miller as supervisor of advertising production. Miller joined Airtemp in February, 1959.

Zaino joined Chrysler this past January as a copy writer.

E. Roy Industries, Ltd. Acquired by Hupp

CLEVELAND — Hupp Corp. has acquired for cash all outstanding stock of E. Roy Industries Ltd., Montreal, Que., Can., Don H. Gearheart, Hupp president, and Edouard Roy, president of the Canadian company, announced.

Total amount and terms of the transaction were not disclosed. The Canadian concern, under present management and personnel, will be operated as a subsidiary of Hupp, Gearheart said.

E. Roy Industries has annual sales of approximately $6.5 million. The company manufactures household refrigerators, gas and oil warm air furnaces, and gas and electric ranges under the brand name "Roy." It also has an aircraft division which makes parts and assemblies for Canada's T-33, F-86, and CF-104 jet aircraft. Manufacturing facilities totaling 160,000 sq. ft. are located in L'Assomption, Quebec.

Hupp expects to add air conditioners and food freezers to the Roy line, with the expectation that "Roy will be a leading Canadian major appliance producer in the near future," Gearheart predicted.

"This acquisition significantly strengthens Hupp's position in the rapidly-growing Canadian market and promises an immediate expanded sales potential for Hupp," Gearheart said. "A full-scale cooperative effort will be inaugurated to manufacture quality appliance and heating products especially for the needs of the Canadian market," he continued.

"With a 20% import duty plus freight on refrigerators shipped into Canada from the United States, we believe a Hupp-owned Canadian manufacturing facility employing modern U.S. designs and production methods will enjoy a substantial marketing advantage," Gearheart further pointed out.

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Wholesaler: Pacific Metals, Ltd. Contractor, Frank Samuels Distributing Co.

Dressed beef being conveyed from slaughter room to chill room.

At right, one of nine KRACK F1700ST ceiling units hold room at constant temperature, humidity level.

"We demanded the Best... and got it!"

21 KRACK units at Harbour Meat Co. hold temperatures from -15° to +52°

... according to Mr. Glenn Harbour, manager and partner, their meat packing plant in Tucson, Arizona, was designed and built from the ground up to assure retaining of meat quality through proper processing, cutting and aging.

"Quality is extremely important—we raise our own prime beef and want to make sure it gets to customers in top condition. Since refrigeration can mean the difference between good and bad meat, we had to have units that would hold temperatures dependably, at reasonable cost. We found that KRACK standard production units filled our specifications to the letter."

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1 Heavy duty water defrost unit cooler — ZE2000F
9 High efficiency unit coolers — F1700ST
6 Heavy duty product coolers — MA2100F
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1 40-ton evaporative condenser with 9 circuits — 4AE40
2 Air conditioning units for meat cutting rooms — CM400AC

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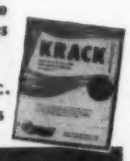

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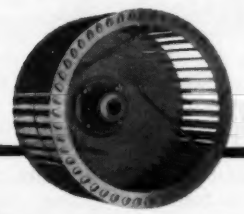

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NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Air Conditioner Sales Picture--

(Continued from Page 1, Col. 5)

1959. Reports indicated that some production continued in July, but apparently less than last year.

Distributor Sales to Date: Probably 25 to 30% higher for the 10 months' period, but most of the increase came in the latter part of last year and in the early months of 1960, with considerable slowing down in the past two months. This is more true in room air conditioners than in unitary equipment. Distributor shipments of room air conditioners in Philadelphia, where the Electrical Association keeps some pretty reliable figures, showed gains in the hundreds of percent in the closing months of 1959. For the first six months of 1960 the gain was about 12% over the first six months of 1959, and June, 1960 shipments were down 33% from June, 1959.

Sales at Retail: Since very little of the shipments of unitary air conditioners goes into inventory, a reasonable estimate might be that retail sales of such equipment has increased 10 to 20%. There will be a wide variation in the increase by geographic areas, and it is possible that some areas may have shown a decrease.

In room air conditioners the picture is very spotty geographically, but while buying in the early months was generally up, big surge of "impulse buying" failed to come in the larger northern metropolitan centers and in some generally good markets like St. Louis and Kansas City.

However, in the south and southwest sales were believed to have shown some good increases. A New Orleans retailer whose best year was around 1,000 units, thinks he might do 2,000 this year. In the Far West, the southwest, Florida, and in parts of the southeast good retail movement was reported. And some of the top New York retailers said that while sales were down in June and July, "they weren't off as much as you might think."

In the larger (applied) systems, there is little to go on other than the word of the individual manufacturers, who supply pretty much to order. Into June volume was up about 10%, it was estimated, but there seemed to be some slackening off tendency in July.

Inventories: As explained above, it is unlikely that there are any excessive inventories of unitary equipment, although in certain areas there may be some heavier-than-usual stocks.

In room air conditioners the amount of inventory is the Big Controversy. Late last month Lincoln M. Larkin, manager of the Whirlpool Corp. air conditioner department, was quoted in a *New York Times* story as saying that as of the middle of July there were 1,361,000 unsold room air conditioners in factory, wholesaler, and retail store inventories.

He broke this down into 318,000 units in factory inventory; 542,000 in wholesale warehouses, and 500,000 in retail stores.

There are many in the industry with access to reliable data who take exception to this estimate. A representative of Westinghouse Electric Corp., which reports its figures to the same association as Whirlpool, estimated a total manufacturer inventory a good 30% less than Larkin's figures. Representatives of several manufacturers have stated that the figure of 542,000 units in distributor inventory would seem to be 25% high on the basis of all available figures. The question of the number of units held in retail stores is one that can't be solved, but there are many who think it would be difficult to find that many units in retail stores.

June Room Unit Sales Hit 228,800—NEMA

NEW YORK CITY—Estimated total industry sales by manufacturers of room air conditioners in June amounted to 228,800 units, according to the National Electrical Manufacturers Association.

This brought sales for the first six months of 1960 to 1,117,000 units, NEMA estimated. The figures are based upon expansion of data reported to the NEMA Statistical Dept. to cover total industry sales including exports.

Pioneer Leasing Formed

PORTLAND, Ore.—Elwyn H. Boly has formed Pioneer Leasing Co. here to lease air conditioning units, central heating units, refrigerators, ranges, etc., in Greater Portland.

York Monthly Shipments Running Ahead of '59

YORK, Pa. — Monthly shipments through June from the York Div. of Borg-Warner Corp. continued to run ahead of the same months in 1959 for the sixth straight month, according to Joseph B. Elliott, president.

Elliott said that final tabulation of shipments in all areas of the firm's air conditioning, refrigeration, and heating equipment showed June to be 15% ahead of last June and volume for the first six months to be 18% larger than the same period in 1959.

Austin Rising, vice president and director of marketing, said that although all product lines registered some gains, "commercial air conditioning was the outstanding performer."

Air Conditioner Use Contributes to Record Electricity Production

NEW YORK CITY—Warmer weather in many parts of the country which led to increased use of air conditioners contributed to record production of electricity in the United States for the week ended July 30, it was reported.

The Edison Electric Institute said production in that week totaled 14,746,000,000 kilowatt-hours, compared with 14,425,000,000 in the preceding week and 13,775,000,000 in the corresponding 1959 week. The previous high was 14,523,000,000 kilowatt-hours, set in the week ended on Jan. 23, last, according to the report.

Funeral Services Held For Wm. J. Schemers

DETROIT — Funeral services were held last Wednesday for William J. (Bill) Schemers, local refrigeration contractor, who died July 30 at his summer home at Otsego Lake. He was 55 years old.

Schemers was active in the Refrigeration & Air Conditioning Contractors Association of Detroit and served as secretary of the group for several years. He also served on the board of directors of Refrigeration & Air Conditioning Contractors Association, national.

H. C. Hoffmann

W. L. McGrath

A. W. Sherman

T. Skoglund

Carrier--

(Continued from Page 1, Col. 3)

ly general sales manager of the former Machinery & Systems Div., he will assume line responsibility for the engineering, production, and sale of larger air conditioning and refrigeration equipment.

Holder of more than 100 patents in the air conditioning field, William L. McGrath has been appointed general manager of the Unitary Equipment Operation. Prior to assuming his new post he served as chief engineer of the former Unitary Equipment Div. McGrath will be in charge of activities relating to the design, production, and sale of self-contained air conditioning.

Allen W. Sherman, who had been director of personnel administration for all Syracuse divisions of Carrier, will become director of personnel for the new division, the largest in the corporation. In addition, he will continue to head Carrier's labor negotiating committee.

Named director of advertising and sales promotion of Carrier Air Conditioning Co. is Theodore Skoglund, formerly manager of marketing services for the Unitary Equipment Div. Skoglund joined the division in 1953.

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How Wholesaler Uses 'Robot Kardex'

NEW YORK CITY—How one wholesaler controls inventory of thousands of low-profit items economically and effectively is the subject of a case history on Aaron & Co. of New Brunswick, N. J., published by the Remington Rand Div. of Sperry Rand Corp.

Wholesaler of plumbing, heating, and air conditioning parts and equipment, the company serves about 600 customers through four outside salesmen, and its stock covers about 13,000 items. The case history tells how the firm adapted an inventory system housed in three "Robot Kardex" units to gain effective control of these items.

The company points out that the very items which are often left uncontrolled on the theory that the money involved is too little to warrant such action, are those which comprise an important part of their stock.

A copy of the case history is available at any Remington Rand branch office or by writing to Remington Rand Div., Sperry Rand Corp., 315 Park Ave., S., New York 10, N. Y., and requesting a copy of CH 1246.

•

Flomatic Line Covered

HOOSICK FALLS, N. Y.—A new catalog published by White Flomatic Div., Flomatic Corp., valve manufacturer here, lists and describes Flomatic's full line of foot, line check, union swing check, globe, and angle valves.

Featured is Flomatic's new disc retainer guide made of Du Pont "Delrin," a plastic with high impact strength which replaces the vulnerable metal moving part, according to the company.

Offers 2 Booklets On Solderless Terminals

HARRISBURG, Pa. — Technological and company history unfold side by side in the story of AMP, Inc. as told in the new file-size booklet, "From Kite and Key to Outer Space."

Taking its title from the experimental activities of Benjamin Franklin, the new company history traces activities from the earliest basic applications of AMP's solderless termination techniques to numerous advanced electronic components, according to the company.

Also available from AMP is a new, 10-page booklet which tells the story of the company's service program, "Creative Analysis."

The booklet defines the service and graphically illustrates the various analytical studies and procedures offered to the industry.

Imperial Catalogs Tubing Tool Line

CHICAGO — A complete line of tubing tools is presented in a new 32-page catalog by The Imperial Brass Mfg. Co.

Catalog No. 3121 presents its data with new conciseness and is far easier to use, the company said.

The catalog shows over 75 different Imperial tools and kits for all tubing work—cutting, flaring, bending, reaming, swaging, pinch-off, refacing, and sizing. It also contains complete data on such miscellaneous items and service aids as test caps and plugs, air nozzles, blowers, machinery cleaners, and drum faucets.

"This catalog contains 25 new items never before listed and 10 tools so recently developed that they have not been announced to the trade," it was stated. "These include:

"A ratchet handle for lever-type benders which helps make bends on hard tubing with minimum effort, even in close quarters.

"A precision 37° flaring, squaring, and deburring tool (developed for the Navy) for 12 sizes from ⅛ to 1½-in. o.d. tubing.

"A 45° flaring tool for larger tube sizes.

"A 45° sweep flaring tool which simultaneously flares and burnishes tubing.

"A tube cutter for DWV (drain, waste, and vent) tubing.

"A hose and plastic tube cutter.

"A heavy duty 37° flaring tool built for continuous rugged service.

"Sizing tools for re-rounding tubing when flaring or making sweat-type joints.

"A precision 37° or 45° production flaring tool which converts to a swaging tool with adaptors.

"A special tubing tool kit for plumbing service.

"Important also is the addition of a comprehensive five-page replacement parts list for Imperial tools and service aids. Other pertinent information includes the listing of Federal specifications which apply to over 40 Imperial cutting, flaring, and bending tools.

Tubing Tool Catalog No. 3121 is available on request from The Imperial Brass Mfg. Co., 6300 W. Howard St., Chicago 48, Ill.

•

Brochure Describes Wolverine 'Strubing'

DETROIT — Wolverine Tube, division of Calumet & Hecla, Inc., has announced the publication of an eight-page brochure on one of its most recent developments called "Strubing."

Strubing is a seamless light-wall tube and will be produced by the company in most metals. It is unique in the fact that it is processed in strip form and rolled up for compact shipment, Wolverine Tube said.

The brochure, which outlines the economies of packing, shipping, and storing of the product, explains how mechanical techniques are used to expand the strip into tubular form, the alloys which are presently being worked on, method of fabrication, size range, and other particulars.

A copy of the brochure can be obtained by writing: Wolverine Tube, Division of Calumet & Hecla, Inc., 17200 Southfield Rd., Allen Park, Mich.

•

AC Multi-Shielded Motors Cataloged

LOS ANGELES—A comprehensive catalog dealing with Sterling A C multi-shielded motors is available from Sterling Electric Motors, Inc., 5401 Telegraph Rd., Los Angeles 22, Calif.

This illustrated 56-page catalog includes pricing and dimensional data on motors of this type, ranging from ¼ to 200 hp. Information is included for various modifications. A special section deals with motor selection and application.

*"Why wasn't I aware of those facts?"

Be glad that the "man in the dark" isn't one of the industry's more than 22,000 NEWS' subscribers!

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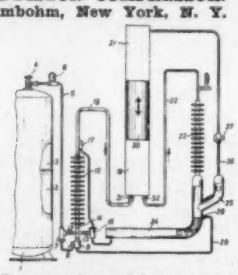
PATENTS

Week of April 12

2,932,172. COMPRESSION REFRIGERATING SYSTEM UTILIZING A FREE-PISTON COMPRESSOR. Peter Schlumbohm, New York, N. Y.

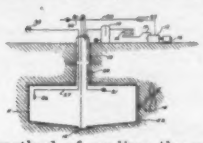


1. Compression-refrigerating system utilizing a free-piston compressor and a refrigerant which is suitable as motor fuel, comprising an evaporating, compressing and condensing circuit having an evaporator, a suction line, a compression line, a condenser, a receiver, a purging line, and a free-piston compressor; said free-piston compressor comprising a combustion space on one side of the free-piston and a refrigerant-compressing space on the other side of said piston. . . .

2,932,176. CABIN TEMPERATURE CONTROL. Thomas P. Farkas, Bloomfield, Conn., assignor to United Aircraft Corp., East Hartford, Conn.

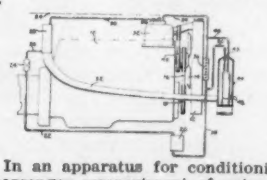
1. In an air conditioning system for an airplane compartment, a source of air supply for said compartment, a heat exchanger for cooling air flowing from said source to said compartment, a supply of refrigerant for said heat exchanger, including a compressor having an inlet connected with the outlet of the refrigerant section of said heat exchanger, a valve in the connection between said heat exchanger and said compressor controlling the refrigerant pressure in said heat exchanger, means responsive to variation in said pressure from a selected pressure for actuating said valve. . . .

2,932,170. REFRIGERATED UNDERGROUND STORAGE SYSTEM. Morton Kingsley Patterson, Golden Valley, and Robert L. Loofbourow, Minneapolis, Minn.



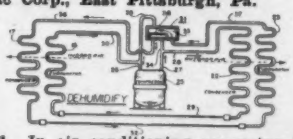
1. A method of sealing the walls of an underground storage system for fluid products against leakage of the stored fluid which comprises continuously circulating a cooling fluid adjacent to the walls of the storage system to freeze the ground water therein and seal the storage system against leakage of the stored fluid and thereafter continuously recirculating the cooling fluid to maintain the walls frozen, said cooling fluid being circulated through a conduit system so that no contact between the cooling fluid and stored product may be had.

2,932,177. AUTOMOBILE AIR CONDITIONER. Paul H. Brennan, Dayton, Ohio.



1. In an apparatus for conditioning the passenger compartment of automobiles and the like having an air cooled heat radiator and a fan for moving air over the radiator, said apparatus including a liquid refrigerant, an evaporator communicating with said passenger compartment for receiving said refrigerant to extract heat from the passenger compartment, means receiving vaporized refrigerant from the evaporator for compressing the refrigerant vapor. . . .

2,932,178. AIR CONDITIONING APPARATUS. Alfred Armstrong and Michael D. Ulich, East Longmeadow, Mass., assignors to Westinghouse Electric Corp., East Pittsburgh, Pa.

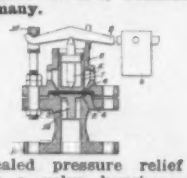


1. In air conditioning apparatus including a compression refrigeration system, a compressor, first and second indoor heat exchangers, first and second outdoor heat exchangers, means providing a first refrigerant flow path from said compressor through said first outdoor heat exchanger to said first indoor heat exchanger and back to said compressor, and means including a reversing valve providing a second refrigerant flow path parallel to said first refrigerant flow path and adapted to selectively direct refrigerant from said compressor through said second outdoor heat exchanger to said second indoor heat exchanger or through said second indoor heat exchanger to said second outdoor heat exchanger. . . .

2,932,225. TUBE BENDING DEVICE. James M. Gardner, Milwaukee, Wis.

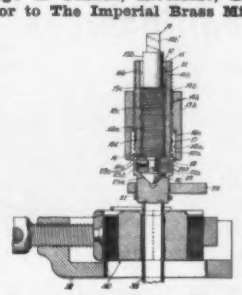
1. In a manually operable tube bending device, the combination with opposed tube engaging members, one being arcuate and engageable with one side of said tube and the other being hook-like and engageable with the opposite side of said tube at a point adjacent one end of said arcuate member, the opposite end of said arcuate member having a foot engaging portion of a spirit level including an air bubble carried by said device at an angle normally inclined from a horizontal plane and movable with said device to a horizontal plane during tube bending operations, whereby the degree of bend of said tube is evidenced by the spirit bubble. . . .

2,932,308. PRESSURE RELIEF VALVE. Karl F. Erb, Frankfurt am Main, Germany.



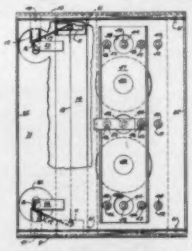
1. A sealed pressure relief valve comprising a valve housing, axially aligned inlet and outlet passages in said valve housing, the inlet passage being unbranched, a valve seat in the inlet passage and facing the outlet passage, a valve head axially movable toward and away from said seat to close off the inlet passage when against said seat, a peripheral ledge at the inner end of said inlet passage. . . .

2,932,338. DOUBLE FLARE TOOL ON A SHAFT THREADED IN A SLEEVE THREADED IN A SUPPORT AND ARRANGED FOR TWO SPEED ADVANCEMENT OF SAID TOOL. George E. Franck, Riverside, Ill., assignor to The Imperial Brass Mfg. Co.



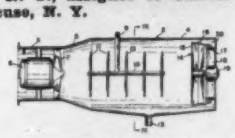
2. In a tool for flaring the end of a tube, a base, a support element spaced from said base and having a threaded bore extending axially toward said base, a tubular sleeve threadedly carried in said bore, and an elongated carrier member threadedly carried in said sleeve for rotational and axial movement therebetween, and frictional means extending between said carrier member and sleeve applying a constant force therebetween at all times. . . .

2,932,359. ELECTROSTATIC PRECIPITATORS. Arnold C. Fields, Medfield, Mass., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa.



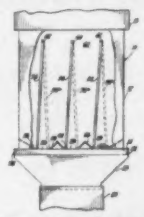
1. An electrostatic precipitator comprising top, bottom and side plates forming an open-ended rectangular casing having a gas inlet at one end and a gas outlet at the opposite end, a plurality of spaced-apart, parallel, vertically extending, collector plates supported from said side plates between said inlet and said outlet, said top and bottom plates having rectangular openings having front edges between said inlet and said collector plates, having side edges between the outermost of said collector plates and said side plates. . . .

2,932,360. APPARATUS FOR TREATING AIR. Ernest C. Hungate, Liverpool, N. Y., assignor to Carrier Corp., Syracuse, N. Y.



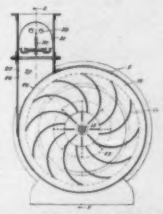
1. An apparatus for treating air comprising a casing having first and second openings, a fan mounted adjacent said first opening adapted to induce an air stream through said casing, means for spraying water in the casing, means for draining water from said casing and a rotary eliminator including a plurality of radially disposed blades, each blade having at least a first planar member extending substantially from the axis of rotation. . . .

2,932,429. ICE DISPENSING MACHINE. Wilbert P. Mannhardt, Park Ridge, Ill.



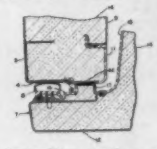
4. A coin operated ice dispensing machine for use with a machine for making ice cubes or the like comprising in combination: an insulated container adapted to house ice cubes or the like and having a base plate with ice dispensing openings; a chute spaced immediately below said openings to receive said cubes or the like from said openings when the space therebetween is unobstructed. . . .

2,932,444. BLOWER. Kendall L. Walker, Manchester, Conn., assignor to The Spencer Turbine Co., Hartford, Conn.



1. A blower of the centrifugal type including a cylindrical casing having a series of compression chambers and impellers therein for moving air through said compression chambers, a motor for driving said impellers, an axial inlet leading into the first of the compression chambers in the series, an outlet in each of the compression chambers leading into the next compression chamber in said series, a plurality of said compression chambers with the impellers therein providing a primary stage in said blower. . . .

2,932,545. MAGNETIC DOOR LATCHING ARRANGEMENT FOR REFRIGERATOR. Thomas P. Foley, Louisville, Ky., assignor to General Electric Co., a New York corporation.



1. A refrigeration unit comprising a cabinet including a plurality of heat insulating walls enclosing a food storage chamber having an opening on one side, a heat insulating plastic section surrounding the periphery of said opening, a door having a heat insulating plastic section arranged around the periphery thereof and arranged to move into abutting relationship with said heat insulating plastic section of said cabinet member when said door is in the closed postion across said opening. . . .

(To Be Continued)

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications $10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

TWELVE YEARS' experience in commercial and residential heating, ventilating and air conditioning at the medium dealer level, including actual functions of licensed journeyman and master mechanic. Excellent technical background in: refrigeration, especially as applied to remote and built-up central station installation and service; electrical wiring and controls on multi-zone air and chilled/heated water circuits; low and medium velocity duct system design and installation; trouble shooting; customer relations. Considerable experience in direct-fired absorption packaged units including remote ammonia chillers. I am interested in advancing to manufacturers field service, application engineering, or technical training division, (had teaching experience). Am partner in contractor/dealership on East Coast past 8 years, was heating equipment sales and service manager before that. Age 35. BOX A6596, Air Conditioning, Heating & Refrigeration News.

TECHNICIAN, HEATING-air conditioning, age 33, seeks position in product design and development. Eight years varied experience includes development of residential and commercial units and heat pumps, laboratory testing and instrumentation, supervisory responsibility and field service. Desire to relocate with medium-sized company in Midwest or West. Reply BOX A6598, Air Conditioning, Heating & Refrigeration News.

MANUFACTURERS AGENCIES — Wanted. We are looking for manufacturers agencies in air conditioning, heating and refrigeration in Philadelphia, New Jersey or New York area. We are qualified consultants along these lines. Replies confidential. BOX A6599, Air Conditioning, Heating & Refrigeration News.

POSITIONS AVAILABLE

SHOP SUPERINTENDENT wanted by manufacturing and assembly heating and air conditioning plant in Florida. Must be capable expediting construction, handling employees and cost conscious. Small but fast growing company with good future. Send complete resume — background, age, education, salary expected to: P. O. BOX 5897, Jacksonville 7, Florida.

REFRIGERATION INSPECTOR. Inspecting and testing the installation and performance of refrigeration equipment. Must be a high school graduate with advance training in refrigeration with a reputable firm or college. Minimum age 24. Salary $7443 to $7819. Detroit residence required. Apply DETROIT CIVIL SERVICE COMMISSION, 102 Old City Hall, WO. 5-4200, Extension 433.

AN OLD national retail sales organization manufacturing their own exclusive design equipment needs an experienced commercial refrigeration salesman for New York, Pennsylvania, and New England States. No ceiling on earnings which run from $12,000.00 on up commensurate on ability and willingness to work. Give resume of experience and earnings. All replies confidential. Our men know of this ad. Reply to BOX A6597, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT WANTED

ATTENTION AUTOMOBILE air conditioning manufacturers. We are ready to stock parts for resale to dealers, installers and service depots only, in Greater New York and adjacent territories. Contact — AUTOMOTIVE & COMMERCIAL AIR CONDITIONING SUPPLY CO., INC., 43-11 Hunter St., L.I.C. 1, New York.

COPELAMETIC PARTS: Will buy your surplus parts on Copelametics. Need discharge and suction valve reeds, two to ten horse-power models. Give description, quantity and price. UNITED REFRIGERATION CORPORATION, 514 W. 12th St., Los Angeles 15, California.

EQUIPMENT FOR SALE

ONE USED Kinney high vacuum pump type DVD8810 equipped with 5 h.p. GE motor 220/440V, 3 phase. Ready to go to work. $900.00 freight prepaid. E. B. SMITH, INCORPORATED, P. O. Box 12077, St. Petersburg, Florida.

ATTENTION REFRIGERATION Servicemen. Send for catalog listing values in refrigeration and air conditioning parts, relays, capacitors, compressors. Savings up to 50%. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13, Illinois.

BUSINESS OPPORTUNITIES

FLORIDA OFFICE and warehouse on percentage basis. Economical way to start a branch office. We own four story building midway airport and downtown. Four offices, 8000 ft. warehouse, loading platform, freight elevator, parking—girl on telephone. Will handle shipments, deliveries, warehousing and phone calls on percentage. MINTHORNE, 2802 N. Howard St., Tampa.

FOR SALE — Heating & air conditioning, sheet metal shop, in busy Central California town. Good growing business, records open for inspection. Name brand air conditioning equipment etc. Will sell or lease building. Good service business established. Reason for selling other interests. Write BOX A6592, Air Conditioning, Heating & Refrigeration News.

COMMERCIAL & DOMESTIC sales service refrigeration, air/cond. home appliances business for sale, located in New York growing suburban area. Business located in same building 22 years. Will rent or sell building with comfortable living quarters in rear. All replies strictly confidential. Write BOX A6595, Air Conditioning, Heating & Refrigeration News.

MISCELLANEOUS

MECHANICAL ESTIMATOR'S Guide, 1960, new well organized estimator, solid, up to date pricing labor and material any size air conditioning project —piping, chillers, insulation, towers, charcoal filters, blowers, etc. Eliminates waste hours, for high caliber owners and engineers, a profit standard, plastic bound. $6.00. Write TECHNICAL GUIDE PUBLICATIONS, Dept. N, 224 N. E. 59th Street, Miami, Florida.

ENGINEERED BY EDWARDS
AIRVEC
The completely silent
Air Cooled Condenser
Never needs cleaning
WRITE FOR BULLETIN AV-4
WATER COOLED COAXIAL CONDENSERS
Domestic and sea water models
Reduce costs 40% . . . Reduce condenser water 35% . . . Reduce refrigerant charge . . . Stabilize capillary performance . . . Compact shapes.
WRITE FOR BULLETIN TT-653
MOTORIZED VALVES
For chilled water cooling systems and for heating systems . . . 100% positive shut-off . . . Compact . . . Low cost . . . Low Voltage . . . No current draw when open.
WRITE FOR BULLETIN MV-1
EDWARDS ENGINEERING CORP.
938-3 Alexander Ave., Pompton Plains, N. J.
TEmple 5-2808
"One of the nation's largest manufacturers of Residential and Commercial Boilers, Baseboard and Steel Fin Radiation, Motorized Valves, Air and Water-Cooled Refrigerant Condensers."

Stolen Room Air Conditioners--

(Continued from Page 1, Col. 1)

show up in another area of the country and dealers may be approached for their installation or possibly any necessary service that may be required in the future.

"We have alerted the New York distributors of the brands stolen, together with the manufacturers as to the models and serial numbers. We are offering a reward of $100 for any information that could possibly lead to the apprehension of the thieves.

"Perhaps your readers," he told the NEWS, "could be on the alert for any of these models and advise us regarding same."

The company listed the following as the makes, model numbers, and serial numbers of the stolen units:

CARRIER

Model	Serial
51BA-070101	0016698
51BA-070101	0016699
51BA-070101	0016686
51BA-070101	0076035
51BA-070101	0075733
51BA-070101	0075735
51BA-09010	0183804
51BA-09010	0183803
51BA-09010	0183802
51BA-09010	0033124
51BA-09010	0184944
51BA-09010	0184947
51BA-09010	0184965
51BA-09010	0184967
51BA-09010	0184973
51BA-096201	0026325
51BA-096201	0026113
51BA-096201	0026114
51BA-096201	0026112
51BA-096201	0026274
51BA-096201	0026275
51BA-096201	0026272
51BA-096201	0026462
51BA-096201	0026459
51BA-096201	0026498
51BA-096201	0026499
51BA-096201	0026500
51BA-096201	0026300
51BA-096201	0026539
51BA-096201	0026537
51BA-096201	0026458
51BA-096201	0026455
51BA-096201	0026343
51BA-096201	0026341
51BA-096201	0026541
51BA-096201	0026395
51BA-096201	0026573
51BA-096201	0026386
51BA-096201	0026384
51BA-096201	0026476
51BA-096201	0026474
51BA-096201	0026576
51BA-096201	0026469
51BA-096201	0026471

AMANA

Model	Serial
100C2.P	12085
100C2.P	10198
100C2.P	12077
100C2.P	10373
100C2.P	11009
100C2.P	11504
100C2.P	10404
100C2.P	10399
100C2.P	11203
100C2.P	11409
100C2.P	10608
100C2.P	11347
100C2.P	12022
100C2.P	11991
100C2.P	4000967
100C2.P	4000948
100C2.P	4000935
100C2.P	4000949
100LCS.2P	50962
100LCS.2P	51072
100LCS.2P	51077
100LCS.2P	51074
100LCS.2P	51084
100LCS.2P	51071
100LCS.2P	51067
100LCS.2P	51076
100LCS.2P	51080
100LCS.2P	51085
100LCS.2P	51089
100LCS.2P	50819
100LCS.2P	51078
100LCS.2P	51069
100LCS.2P	51079
100LCS.2P	50797
100LCS.2P	50882

YORK

Model	Serial
JBLS-2	131976
JGAL-2	59673
JGAL-2	59671
JGAL-2	59848
JGAL-2	59539
JGAL-2	54231
JGAL-2	59658
JGAL-2	59423
JGAL-2	59839
JGAL-2	59662
JGAL-2	54709
JGAL-2	55498
JGAL-2	54781

Model	Serial
JGAL-2	54794
JGAL-2	55487
JGAL-2	55500
JB-19	35896

GENERAL ELECTRIC

Model	Serial
R151	16914
R161	05854
R161	10137
R161	10135
R161	05633
R161	05850
R161	05682
R161	04961
R161	10335
R161	10333
R161	05170
R161	05186
R171	20192
R171	24023

FEDDERS

Model	Serial
10CM 2	531497
10CM 2	531579
10CM 2	531498
10CM 2	531480
11D-5	291886

KOLDWAVE

Model	Serial
K11D	10102
K11D	10116

Air Force Drive--

(Continued from Page 1, Col. 1)

Leon F. Williams of the directorate of civil engineering at Air Force headquarters.

"Important areas where I believe there is a great opportunity for conservation" include family housing at Air Force bases with many modern appliances such as air conditioning, Williams indicated.

"Many of these new homes have been metered, and the differences in amounts of electricity and gas used by families living on the same base and in identical houses is amazing," Williams declared. "At one base where we are metering several Capehart houses, we have seen where one family unit will use 2½ to 3 times as much energy as another similar unit. . . .

"Some people just are not conservation minded," he continued. "They must waste electricity and gas, or else why should such wide differences exist?

"Most of these houses down South are air conditioned. Many of the occupants want their air conditioning and yet like to leave the outside door open. I don't think they want to be wasteful, but they just need a little educating about the use of the equipment they have in these new homes, and how they can help to minimize the operating and maintenance costs."

Overheating of buildings was also cited by Williams as causing both waste and discomfort.

In opening the three-day conference, Gen. Minton keynoted the need for conservation to reduce operating and maintenance costs by pointing out that "we can expect to have to maintain new systems with no increase in funds or personnel."

[In 1959 (fiscal year) the Air Force spent $163,900,000 for the operation and maintenance of utility plants, it was disclosed.]

The general also called special attention to the changing requirements of new weapons systems of which electric power is an integral part.

"We need more reliable and more dependable power than we have had in the past," Gen. Minton said, adding that this problem is complicated by some of the Air Force installations being in the "most remote locations in the world" where supply lines and personnel represent serious problems.

The conference, which had been master-minded by Wm. T. Smith of Air Force headquarters, was evenly divided between heating, power, and discussions of interest to both groups.

when Heating-Cooling's by DUNHAM-BUSH

A new wing at Doctors Hospital, Michigan City, Indiana, promises to serve as a heating-cooling guide for hospitals when versatility is a must.

One part of a two-type conditioning system uses Dunham-Bush remote heating-cooling units with individual room control. This affords threefold benefits . . . patient's personal room temperature preference . . . separate conditioning for nursery area . . . an aid for control of contamination.

A second type system at Doctors Hospital provides 4-zone conditioning for (1) basement and cafeteria; (2) West first floor offices; (3) East first floor offices; (4) interior examination rooms and laboratory. Used in this system are Dunham-Bush Multi-Zone air conditioning unit; packaged water chiller; circulating pumps. Additionally Dunham-Bush convectors are used for waiting room heating.

Heating-cooling product specifiers find in Dunham-Bush a "one source–one responsibility". No need to deal with dozens of suppliers.

Write for details of dependable Dunham-Bush products designed for hospitals. There's a nearby Dunham-Bush representative to assist in your building plans.

Dunham-Bush, Inc.

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